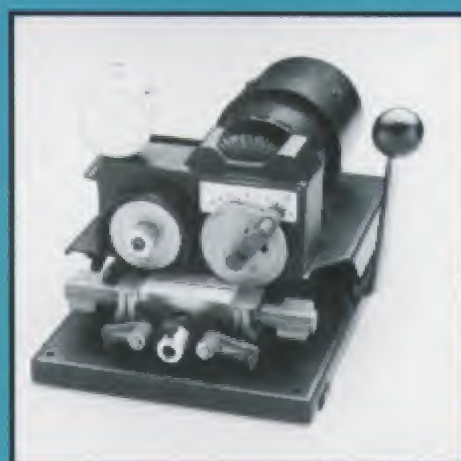
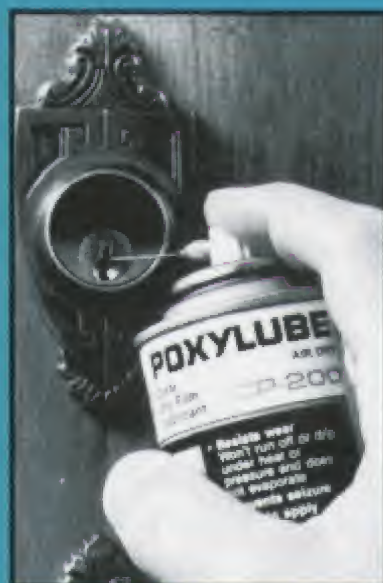
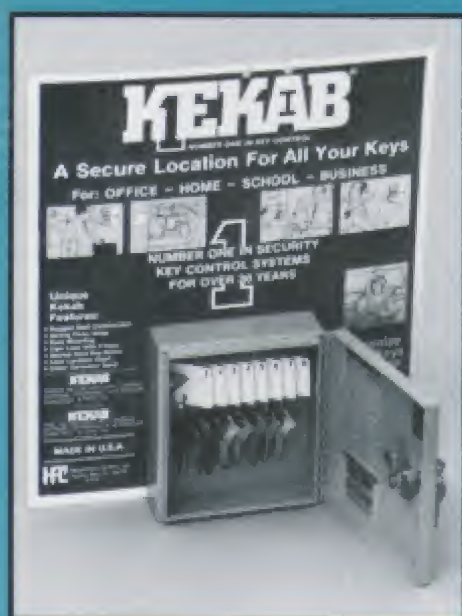


The National Locksmith®

May 1989



New & Profitable Ideas

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The National Locksmith

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New & Profitable Ideas

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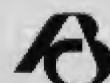
The companies whose products are featured on the cover are as follows: (clockwise from top left) HPC, Inc.; Sandstrom Products; Precision Products; RAM Corporation; Ecco Industries and American Locksmith Service.

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you wish to read**

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Commentary

The Wholesaler And You

The relationship between the locksmith and his distributor is a unique one. In fact, one could not survive without the other. Although you may have the occasional dispute with your supplier, you really do need him. It would be impossible for you, as a locksmith dealer, to inventory the amount of product required to buy direct from the manufacturer. That's what your wholesaler does for you, and he deserves to profit on his investment. And without you, the wholesaler would soon be out of business.

Most manufacturers do not want to spend all day filling small orders. So they sell to wholesalers who stock large supplies of common items. And even some not-so-common items. Then you as the dealer draw from the distributor's supply of that item. Your wholesaler inventories everything from locks to key machines to parts and tools. All this expensive stuff sits on his shelf just waiting for your order. He has many thousands of dollars tied up in inventory so he'll have what you want when you want it. That's how your wholesaler makes his living and pays his employees.

Of course, he also wants to provide you with quick service, good advice, and reasonable prices. But if he can't make money on an item, he will not want to stock it. Then when you decide you need just that particular item to be shipped ASAP, it will be backordered. So you can't begrudge your supplier his mark-up.

It used to be that most all locksmiths bought from the distributors located in his town or area. That meant that the supplier and the locksmith got to know one another. They knew each other's families, and understood each other's problems. But today things have changed some.

We live in a world where computerized order entry and fast shipping services mean that you don't really need to live near your supplier anymore. In some ways, this situation has been good for the industry. Prices are now more competitive because a locksmith in Chicago can easily purchase from the Midwest, the East or the West Coast. Wholesalers seem to be inventorying more stock to quickly fill your needs. People aren't too patient with backorders these days.

But at the same time, something has been lost by all these changes. Distributor margins have been squeezed, making profitability harder. And the closeness of the locksmith/distributor relationship has suffered. Perhaps you now buy from five or six companies, using whoever has the cheapest price that day. When is the last time that you actually went to a supplier's pick-up counter and met him face to face? Probably it has been awhile. Today, your own time is so valuable that you probably know the UPS man better than your wholesaler. And that is unfortunate.

In this industry, like many others, the dealer and the wholesaler really do depend on one another so that *both* can make a living. Progress always seems to carry problems along with the advantages. So next time you get peeved with your distributor, remember that he really does deserve to make a living too. Without him, more of your cash would be on the shelf and less of it would be in your pocket.

I have been feeling guilty lately about running the photograph of me that appears on this page. That picture was taken in the Spring of 1985, over four years ago. Since then I have lost quite a bit of hair. Last winter, the beard was shaved. And somehow I don't need a haircut quite as often as I used to. So one of these days I'll surprise (or scare) you and drop a new photo in there.



Marc Goldberg
Editor/Publisher

May 5

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and lengths. Please address your comments, praise, or criticism to: Editor, **The National Locksmith**, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Comment Aimed At Lockpick Law

This letter is in response to your invitation for comments on your article about the lockpick law; I offer the following:

The National Locksmith Manipulation (Visa or Mastercard), LDM Enterprises *Car Entry Tools & Manual* (credit card and toll free number), *The National Locksmith Safe Opening* (credit cards).

How does *The National Locksmith* and its advertisers insure that the telephone orders placed with them for the above tools and manuals are for and by bona fide locksmiths, and are not being ordered by the bad guys?

C.T. Seidl
Alaska

Editor's Note: Let's understand one thing right up front. It is impossible to control 100% of anything. Even the Department of Defense can't keep teenagers from breaking their computer codes!

But all responsible companies in the security industry do take precautions with their materials. I think these companies do a pretty good job of keeping these manuals out of the wrong hands. These days it's a lot easier for a criminal to buy a handgun than a locksmith book or tool!

Contest Winner Says 'Thanks'

I want to thank you for the fourth prize in the year end Technitips competition. The KD94 key machine is just great. I will use it in my service van.

Over the past years I have submitted many ideas. You have published them and I appreciate it. I give God the glory.

I appreciate your magazine and look forward each month to receiving it.

Larry Thompson
Arkansas

HULA Prohibition Act Effectiveness Questioned

You asked for comments, on the "HULA Prohibition Act." (Mail order locksmith tools law.)

Yes, we do have a law. For a better description, we have laws on everything. They passed a law on stealing autos—that stopped. They passed a law, on women selling love—that stopped. They passed a law on selling

drugs—that stopped. Now, that we have all these laws we live in Utopia, where all is perfect. So now we are headed towards a more perfect something.

Don't be picking on our dearly beloved public servants, the police and firemen, because they open a few cars. They know how to open up a hole in the wall, where once there was a door, by knocking down the door frame and all, without bothering with the lock.

What I would like the Post office to do, is deliver my mail to me and not to my neighbors and to quit bringing me everyone else's mail.

Herman Teichman, Jr.
Ohio

'Lady Locksmith' Relates To Article

It was a pleasure to read of another female tradesperson in the locksmithing field. Like Kathy Taylor, I too am a female locksmith and was delighted with the article by Jack Roberts in the January 1989 issue of *The National Locksmith*. It is very seldom that a woman in the industry is written up.

Has there ever been a poll taken to find out just how many female service people there are? It would make for an interesting article. Many, as the article stated, are in the industry doing the in-shop work such as phone

Continued on page 98



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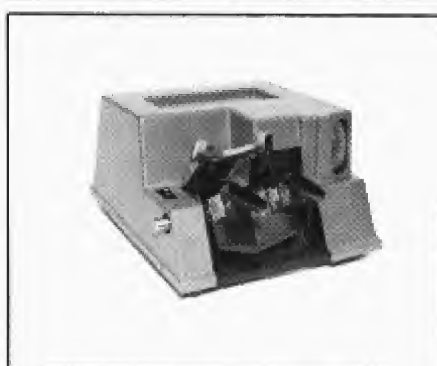
First Prize



HPC Bravo

The two speed motor cuts brass or steel. The 4-way vise jaws securely hold almost any key. A micrometer style depth adjustment and precise shoulder gauging cut the most accurate keys possible.

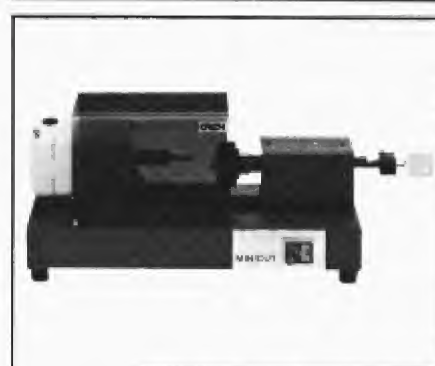
Second Prize



ESP 990 Manual

This machine features double-sided reversible jaws that eliminate the need for adaptors. The carriage is fixed to the sliding carriage shaft resulting in reduced play and less shaft wear.

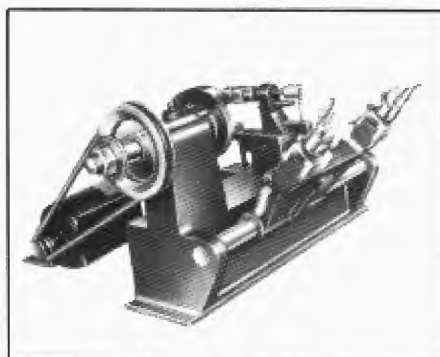
Third Prize



Ilco KD94

Cuts the 1137 tubular key, brass or steel accurately and quickly. Features include large chuck to hold standard size key heads, easily adjustable.

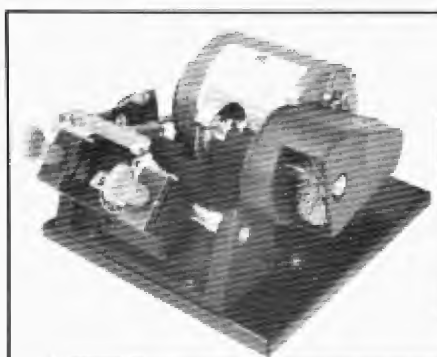
Fourth Prize



Belsaw 200

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

Fifth Prize



HPC 9160

Ideal for large key duplication. Equipped with fine double-sided jaws ensuring accurate cutting with little or no wasted blanks.

Sixth Prize

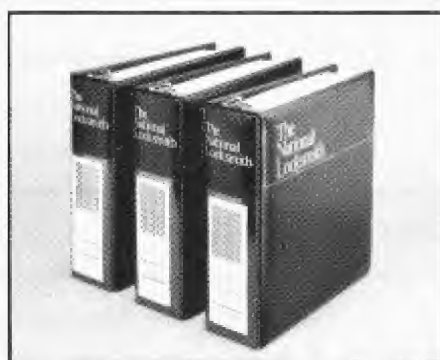


\$150 Cash

Everyone can use a few extra dollars! This prize will brighten your day...and fatten your wallet.

***** Code Books From *The National Locksmith* *****

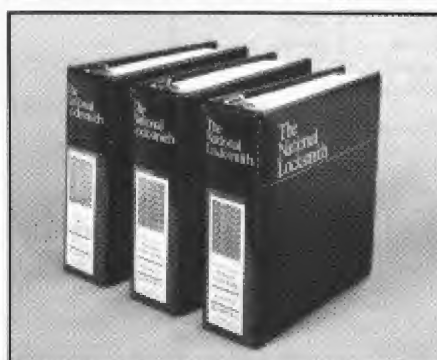
Seventh Prize



General Code Book Set (NGCB)

These three books contain 450,000 codes covering domestic lock and automobile codes.

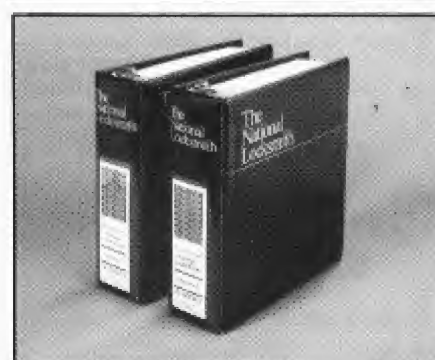
Eighth Prize



Padlock Code Book Set (PCB)

These three volumes offer 462,000 codes covering Dudley, American (Junkunc), Master and Yale.

Ninth Prize



Foreign Car Code Book Set (NFCB)

This two volume set holds 432,000 codes for the complete variety of foreign cars, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths

Send your Technitips to Robert Sieveking.

May's Best Tip

This Technitip is for opening the Porsche 928 autos. Because of the door design, this is one of the more difficult autos to enter without a key.

Because of wear in the central locking system, these cars have a tendency to lock themselves as the door is closed. Vacuum line problems can also cause these doors and some other German made central locking systems to "self lock."

Illustration one shows the working end of the special tool that will

Make an "S tool" like this.

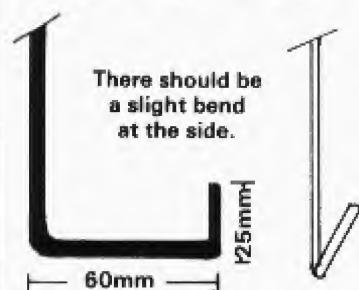
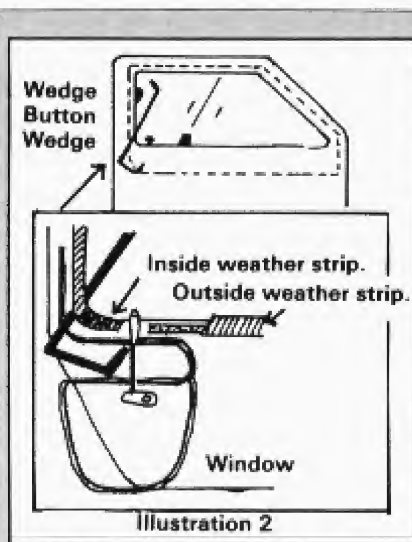


Illustration 1



open this auto. The tool is bent to form an "L" with a 60mm (2 3/4") leg and a 25mm (1") return. Note that the return portion of the tool must be bent slightly as shown to work. Wedge the side glass above "and" below the point of insertion of the tool as shown in illustration two.

Use caution when wedging these doors. If you separate the weatherstrip from the door, it is *extremely* difficult to replace.

You can inspect the area with a flexlight to see the button linkage, if you bend the flexlight like the tool. You will be able to see the button between the cloth and inside rubber strip. You can also see the hole in the protection plate where you need to press the tool up to the button.

It is easy to do with the tool. It may be possible to modify the tool to work better, but this tool works well enough to make money the way it is, so I am satisfied until the next time I am called to open a Porsche.

Again, be careful not to separate the weather strip, it is extremely difficult to put on again.

Goran Agren
Sweden

This Technitip is for GM sport style autos with the floor shifter. If you find yourself faced with the problem of not being able to turn the key far enough to the off position to remove the key, the problem may not necessarily be in the ignition lock. The problem could easily be in the shift linkage.

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not be eligible!** So get busy and send in your tips today! You may win cash, merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1989? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker, decal and patch. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal, patch and a Locksmith Cap. Plus, you may win one of the great prizes pictured above.

As the shifter is moved from the park position to the drive position, you will notice that the lower column housing turns. If you can't get the key to turn to the off/locked position, grasp the lower portion of the column and give it a little help in the locking direction. You'll probably be able to turn the key to the off position.

The linkage under the floor pan can become damaged or bent, preventing the lower column shell from turning far enough to allow the key to be turned to the off/locked position and removed. If you find this to be the problem, refer the customer to a mechanic and don't waste your time removing or replacing the ignition.

David McCandless
Arkansas

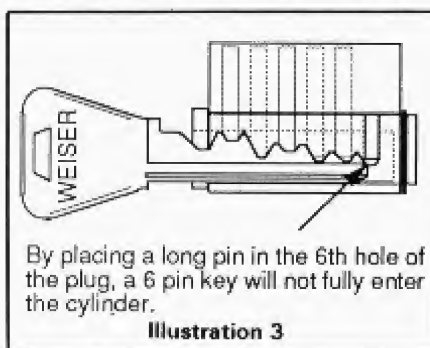
This is a simple tip that I came up with to satisfy a customer that was having problems with keys from another building operating his common entry doors. The customer was using Weiser locks in the common entry locks. Another apartment complex in the area was using Falcon locks with a six pin key. The Falcon keys in some cases,

would operate the entry locks.

Changing the combination on the common entry locks would be the correct way to solve the problem, but this would require that a large number of keys be cut and issued to the tenants at the landlord's expense.

Knowing that the lock plugs were drilled for six pins, and the shells were only drilled for five, I came up with a solution that solved the problem of the six pin keys operating the locks without changing or issuing new keys to the whole complex.

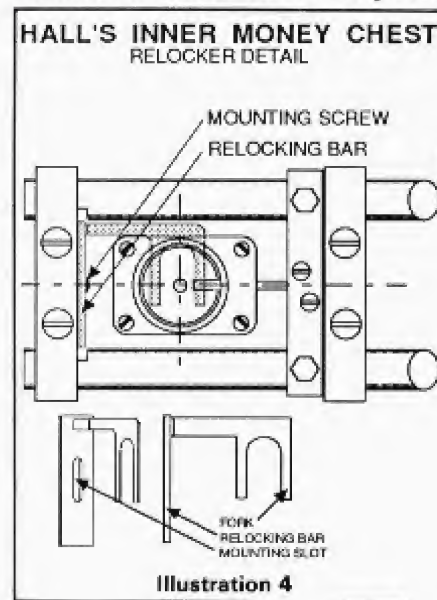
The solution was to place a long pin in the last pin chamber of the lock plug and replace the plug in the lock as shown in illustration three. The long pin in the sixth pin chamber will pre-



vent the six pin key from fully entering or operating the lock. This solved the cross keying problem at very little cost.

R.E. Schachtschneider
Wisconsin

This tip is for those locksmiths that have *The National Locksmith Guide to Safe Opening, Volume One*. On page 98 is shown the Hall inner money chest



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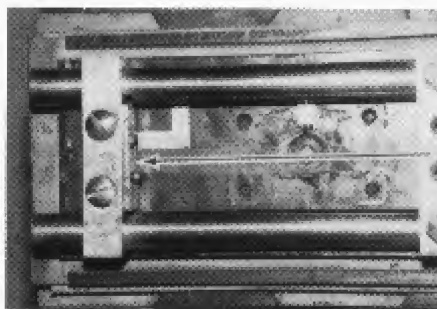
door and bolt works. In the specifications, the door should have no relocker. This is not always the case. The door and lock on page 98 may indeed have a relocker.

Illustration four shows the lock and relocker arrangement. The relocker is a "U" shaped piece, and is mounted between the door and the rear of the lock case. If the lock comes loose, or the lock case is driven away from the door in a forced entry attack, the fork will be freed, and allow the relocker to drop down, relocking the door bolts.

The relocker is gravity operated. If the safe is turned upside down, the relocker will slide up to relock into the upper bolt as shown in the diagram. To neutralize this relocker, drill at 1-1/16" up from dial center, and scratch the relocker up about a quarter of an inch to release the bolts. If you go too far, you will relock into the upper bolt just as if you had turned the safe upside down.

R. Lazich
Wisconsin

Editor's Note: Yes, Hall's did on occasion use an external relocking device, not only in their jeweler's



5. The sliding piece that locks the dead-bolt, shown with arrow.

chests, but also in their free-standing Banker's safes. Though the triggering mechanism came in many shapes and styles, one of which is the "U" in Mr. Lazich's illustration, the sliding piece that actually deadlocks the boltwork is consistently shaped and thus is easily spotted at a glance. This is shown by the arrow in photograph five. My thanks to Mr. Lazich for bringing up a good point.

Here's a Technitip that you can use every day. It is well worth practicing to become proficient. Mortise cylinders without keys are easier to unlock for

rekeying, without a shim or pick if you learn this procedure. Simply remove the tail-piece and retainer from the cylinder. Instead of reaching for the shim and key blank, do as follows:

1. Grasp the cylinder lightly between the thumb and fore finger. Place your thumb half on the back of the plug and half on the back of the cylinder. Place your index finger in the same manner, half on the face of the plug and half on the face of the cylinder body. Hold the cylinder with the top cap or spring retainer side down; that is, with the springs toward the bench and the bottom pins pointing up.

2. With light inward pressure with your thumb (pushing the rear of the plug toward the front of the lock cylinder) rap the cylinder smartly on the bench. The point, is to jar the pins up, against the spring tension, and hang the top pins at the shear line using axial pressure (fore and aft) instead of turning tension, as you would during picking. This method is quite effective, but like picking, the tension is the trick. It takes a little practice to become proficient, but the reward is time saved in picking. This method works best on rim and mortise cylinders.



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Mount a piece of wood to your bench, to strike the cylinders on, to save damage to your bench top. This Technitip is more or less the reverse of holding the cylinder in your hand and striking it with a short piece of a hammer handle or a hardwood club.

Charles Riedel
California

This Technitip is for opening the Chevy Astro vans. If you are having a

real problem opening these vans, this method may work for you.

Use a wood wedge, and carefully work it in under the catch on the left side of the large window on the sliding panel door. Then slide a stiff car opening tool in from the side of the window to flip and release the catch lever on the glass. Repeat this process on the right side of the glass and reach in and unlock the door.

Steve Huff
Texas

Editor's Note: Though this van may be more difficult to open than some, there is an easier method which uses a tool specifically designed for this vehicle. If, because of a malfunction in the locking system, the tool will not work, wedging the glass would be an alternative. Wedging windows of this type is risky business, and best left to non-locksmith type openings.



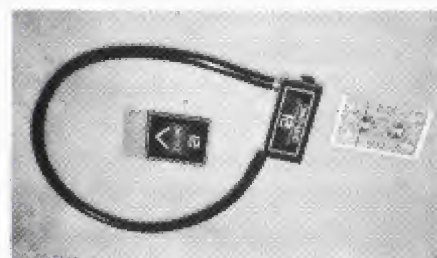
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My Technitip explains how to open and impression an omni-card cable lock. There are two very easy methods of opening this type of lock: 1) Rap the back side of the lock case directly behind where the shackle is inserted, with a rubber mallet. 2) Cut one side of a playing card, just enough to fit into the slot of the lock, and insert it all the way into the lock. At this point, draw a line across the card where it protrudes from the case and remove the card from the lock.

Push the release button with consistent fairly hard pressure, while inserting the playing card into the lock, until the card reaches the line drawn in the first step. The lock will usually open at this point.

Remove the card and examine the impression marks. You may see four fairly distinct elongated impression marks, but you must select only the three deepest ones. With a common paper punch, punch out the card where the impression marks end, but not beyond them. (See photograph 6.) You



6. Playing cards with holes punched at end of impression marks.

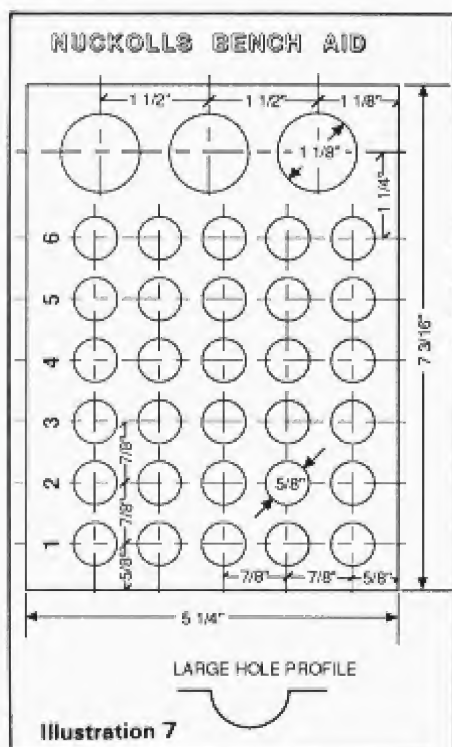
now have a card that can be traced on a piece of plastic and punched out for the customer. The card can also be traced on paper and filed in the customers record for future use.

The original card key has many more punched out section, but this is only a confusing deterrent for the layman. It only looks like a complicated computerized gadget.

Jagon Nogaj
California

This Technitip is for a bench aid that will be of great use to most locksmiths to keep those pins and springs from rolling off the bench and becoming lost. If you pin locks in a truck or mobile shop, you will know how handy this tool can be.

The diagram of the "Bench Aid" shown in illustration seven has stood the test of time. Next to my pinning tweezers, this is probably the most used tool on my bench. It is inexpensive to make, and takes up very little space on the bench.



It can be made of almost any type of wood, but a hardwood will work and last the best. The spring and pin holes were drilled with a standard twist drill, and the large hole was drilled with a bit of my own design. The hole bottoms are rounded and not flat. This makes picking the pins out of the holes much easier. The spring and pin holes are $\frac{3}{8}$ " in diameter and $\frac{5}{16}$ " deep. The pattern of the holes is 5x6. This pattern will allow most masterkeyed cylinders to be disassembled, in order, with a hole for every pin.

R.L. Nuckolls
Kansas

This Technitip concerns modifying the Corbin clover cams to operate the Lori 4500 deadbolts.

I recently installed a number of Lori 4500 series deadbolts that were supplied with Corbin restricted keyway cylinders. The cylinders had the (wide)

cloverleaf cam (159F15-Corbin, 11A Russwin). I had no Adams Rite cams and the .55 Corbin plug won't accept the Lori cam. Cutting down the back of the plug won't help either, because the screw spacing is different.

Lori is producing a new cam (#4200-00-2017) which reduces the amount of cylinder rotation required to throw the bolt. (See illustration 8.) Taking a lesson from the manufacturer, I measured the dimensions and throw or rotation required to throw the bolt and decided that the clover cam was large enough to



Cylinders packed with all Lori 4500 deadbolts will now have this special cam. The new cam requires less rotation than the Adams Rite cam, making the lock easier to operate.

Illustration 8

be reshaped to operate the deadbolt. By removing the darkened portion of

Continued on page 99

NATIONAL

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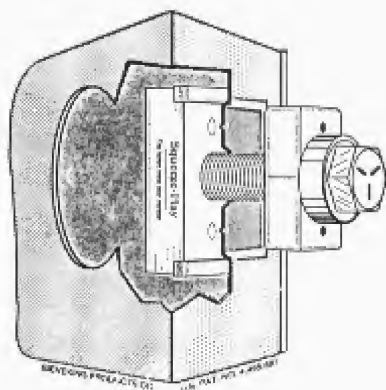
Newsmakers

New Products and Industry News

Sievekings Products' Squeeze Play™

Sievekings Products Company of Rockford, Illinois announces the new Squeeze Play™ hollow metal door mortiser. The mortising tool forms the indentation or mortise necessary to install knob locks and deadbolts in hollow steel doors.

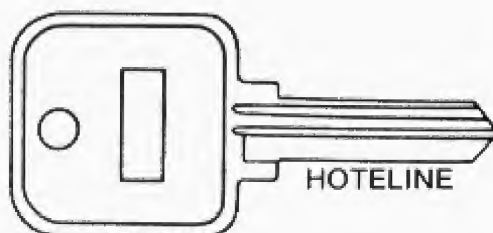
The Squeeze Play tool cuts installation time by two-thirds and provides a factory quality mortise. There is no cutting of the door edge, no loss of structural integrity and no need for door bridges or extra parts. The tool works with both 1" x 2 1/4" standard square face and the heavy duty 1 1/8" x 2 1/4" latch and deadbolts. The tool is designed to easily mortise all edge seam steel doors up to 12 GA sheet steel.



Jet's Custom Hotel/Motel Blanks

A problem in duplicating Hotel/Motel large bow key blanks is the tolerance between the key retaining vises and the guides. Duplicating large keys on many machines cannot be done because the bows of the keys strike the key guide not allowing the blades near the cutting wheel.

Jet Hardware made their blanks applicable to most all key machines currently in use. Uniquely designed, a bow which is 1 1/4" square with 1/4" radius corners was selected. This



dimension then allowed the blank to fit in between the vise that held the key to be duplicated and the vise which held the blank. To overcome interference of the key guide being struck first, the blade of the key was made offset from the center of the key.

Sentry Hotel Room Safe Brochure

A full color 6-page brochure describing its new line of hotel/motel room safes is now available from Sentry Group.

A unique feature of the U.L. rated safes is their use of a pickproof magnetic lock operated by a plastic key card, a system which assures maximum security and minimum maintenance problems. Lock codes can be changed and new key cards made in seconds, and there are no combinations or computer codes for guests to remember.



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Yale Introduces Cardcode™ System

Yale Security Inc. has introduced the Yaletronics Cardcode™ electronic locking system for commercial and industrial facilities, providing an economical means of building security.

This new office security system offers the flexibility to program locks for normal and high security operation, with each lock having the capability of recognizing up to 150 magnetically encoded cards. Cardcode provides each system with a programming card, a master voiding card and



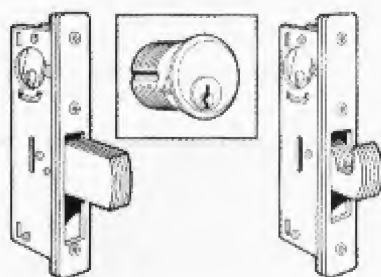
an inventory control system for employee and executive card pairs.

To operate the Cardcode system, the user inserts the programming card into each lock. Then one of the pair of employee or executive cards is inserted and removed. This action makes the lock "recognize" the card as valid.

Circle 281 on Rapid Reply

IDC's Storefront Hardware Line

International Door Closers, Inc. now offers a complete line of Storefront Door Hardware for aluminum and glass doors. A full range of locks, cylinders, flush bolts, header and threshold bolts, offset pivot sets, and more are available for immediate shipment.



International Security Products (ISP) Launched

International Security Products is introducing its new service to the locksmith industry. ISP has been developed to provide a high level of service excellence for smaller, growing locksmiths.

Its toll-free number dials directly through to an order desk that is geared to ship most orders the same day. All major manufacturers are represented in their huge inventory of over 17,000 part numbers. Their policy of no minimum, and COD or Mastercard/Visa only, makes it easy to buy just what you need.

Mayflower Issues A New Catalog

Mayflower Sales has just issued a new catalog detailing their extensive line of sectional key blanks for Corbin, Russwin, Emhart and CCL. Profiles are shown to facilitate recognition.

Major

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ALOA Plans Fourth Annual Golf Tournament

The Associated Locksmiths of America, Inc., has announced plans for the fourth annual ALOA Open Golf Classic, to be held Wednesday, July 5, 1989, at the Bobby Jones Golf Course, Atlanta, Georgia. It is being sponsored again this year by Yale Security, Inc.

The tournament is open to all golfers, locksmiths, manufacturers and distributors. The entrance fee is \$150 per person. This includes transportation to and from the golf course, orientation and breakfast, golf shirt and hat, 18 holes of golf with cart, gifts, prizes, refreshments, and an evening banquet.

Additional tickets for the banquet may also be purchased. According to John Patterson and Reg Moxley, Co-Chairman for the event, "golfers playing in this tournament are not only helping a very worthy cause but will

have a fun-filled day and will really get their money's worth."

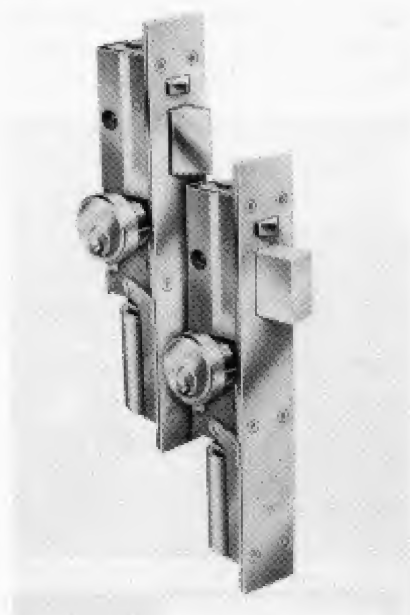
Proceeds from the tournament go to the ALOA Scholarship Fund, which provides financial assistance for individuals to further their education in the locksmith profession. Last year alone, over \$2200 was donated to the scholarship fund. Thanks to Yale's sponsorship, more of the money collected can go into the fund.

The ALOA Scholarship Fund was pioneered by Stan Haney in 1979. It provides the opportunity for persons to take part in the educational classes at the ALOA conventions.

Questions about the tournament may be directed to Ellie Wooderson at the ALOA office, 3003 Live Oak Street, Dallas, TX 75204; (214) 827-1701.

Folger Adam's Correctional-Security Lock

Folger Adam Company has unveiled improvements in its electro-mechanical Series 900 locks. For optimum strength, a one-piece, investment-cast backplate replaces a previous two-piece unit. This provides additional strength and eliminates parts. For ease of maintenance, the new backplate features lubrication holes.



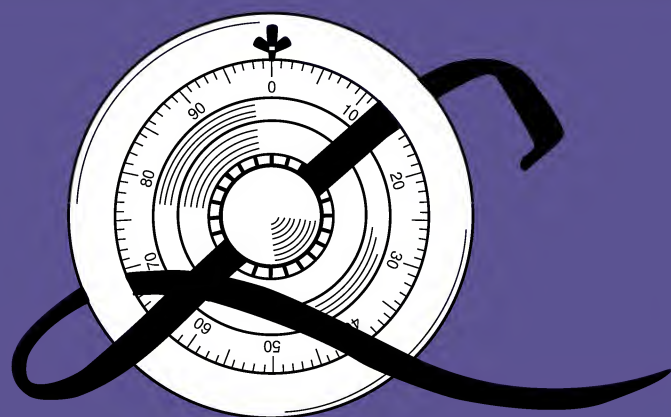
In addition to bolstering durability, the company now offers a power modulator as standard equipment on models with the continuous-duty solenoid. Optional on intermittent-duty dead-latch models, the power modulator reduces operating temperature of the solenoid, increasing its life, and lowers power consumption. It allows either 24 Volts AC or DC to control the lock, without using an additional rectifier. This feature also prevents the solenoid from overheating if the lockbolt is prevented from retracting or extending.

Circle 285 on Rapid Reply

Star Key & Lock Adds New Blank

Star Key announces the addition of #89HPL to its extensive line of key blanks.

Star #HPL89 fits the 1989 Chrysler double-sided ignition locks (Ilco #P1789, N/C #Y154). The new blank is made in solid brass. It is available for immediate delivery from your Star jobber.



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Master Lock Offers Locksmith Repinning Kit

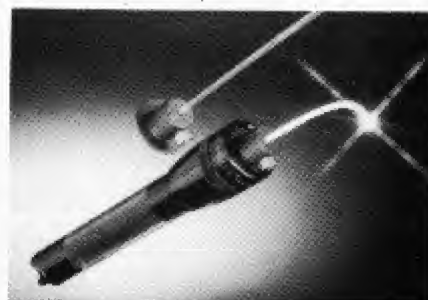
Developed as a professional aid for locksmiths, the Rekeyable Padlock Repinning Kit No. 290 from Master Lock provides everything needed to repin Master rekeyable cylinders (padlock series 21, 24, 25, 27, 28, 101, 220 and 230). Service instructions and data for reordering parts are built into the case. The components are housed in a hinged, 8 x 11 3/4 x 2-inch polyethylene case, fitted with snap latches. A convenient foam work mat prevents parts



from spilling into adjacent compartments if the case is dropped or jostled while the lid is closed. Beveled compartment walls are designed to make it easy to grasp pins and parts with fingertips.

Willow Bend's New Illuminator

Willow Bend has recently introduced a product which provides convenient illumination during difficult wiring and installation operations.

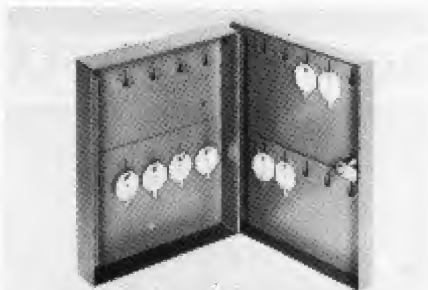


The IC-3 fiber optic inspection adaptor utilizes a flexible, 2mm (.079") monofilament optical-grade fiber to illuminate hard-to-access areas. The anodized aluminum adaptor comes complete with the fiber, which is available in a variety of stock and custom lengths. The fiber transmits light with 90% efficiency at ten meters.

Mini-Wall Cabinet From Lund Equipment

Key control is now available in a compact new mini-wall cabinet for 10 or 20 keys, from Lund Equipment Co., Inc.

The surface-mounted cabinet is made of all-welded steel construction, with 10 hooks on the backwall. Ten hooks can also be furnished on the inside of the door, as an optional feature. The finish is office gray baked-on enamel. The cabinet measures 8" x wide x 10" high x 1 1/2" deep, and weighs three pounds.



***HPC has it all:
Key Machines, Software,
Books, Car Openers,
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Guards, and Key Cabinets***

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ALS Credit Card Keys

"The keys are hinged in a patented way, allowing for repeated use with excellent durability. It cuts easily on a standard key machine."

Credit Card Keys Company, of Tempe, AZ has been working closely with American Locksmith Service of Anaheim, CA to develop a new marketing program specifically designed for the locksmith industry. The program touches on a wide variety of areas, and all elements are based on the high quality of the product itself.

Credit Card Keys are manufactured from DuPont Delrin II, a space-age self-lubricating polymer resin. This DuPont Delrin II is a very strong, yet flexible material, and is just one of the many advantages of Credit Card Keys.

The keys are hinged in a patented way, allowing for repeated use with excellent durability. Delrin II retains its unique blend of strength and flexibility over a wide range of temperature, helping to prevent product failures in extreme weather. It also cuts easily on a standard key machine and wheel, and maintains close cutting tolerances.

One of the most important features of the house and import auto styles is the metal reinforcing shank impregnated in the key, while the domestic auto styles have a thickened Delrin II shank to greatly increase their maximum torque handling capacity.

American Locksmith Service, as the industry's exclusive merchandiser of Credit Card Keys, has developed a new and profitable way of marketing these



keys to the locksmith industry. Credit Card Keys product line currently consists of nine domestic auto styles, 17 imported auto styles and nine newly developed household key styles including SC1, WR3, WK1, KW1, Y1, DE6, AR1 and more.

American Locksmith Service has taken these styles and built a new point-of-purchase display. This display consists of a total of 174 assorted keys, a small carousel rack and a variety of promotional materials such as window posters, lapel buttons and free key coupons.

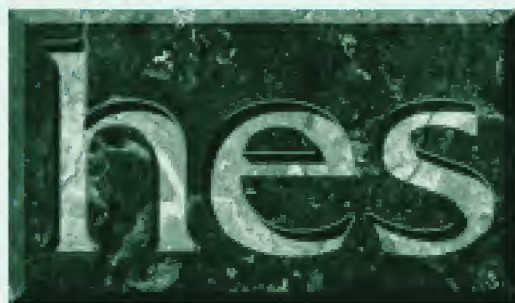
American Locksmith Service has also developed a smaller assortment, which features a countertop visual sales aid along with a reduced quantity

of keys. Credit Card Keys are also available individually for display replenishment or individual sale.

These assortments, as well as the individual keys, are being introduced by American Locksmith Service at an attractive price.

The new program, which features the new price structure, the new P.O.P. displays, the new expanded household key line and the original high quality of Credit Card Keys gives the locksmith many new ways to capture additional profit through both impulse and add-on sales.

For more information contact: American Locksmith Service, 5753-G East Santa Ana Canyon Rd., Suite 231, Anaheim, Hills, CA 92807. ■



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The VoiceKey By Ecco

"VoiceKey requires minimal training for installation, can easily be programmed, and perhaps most important, offers strong profit potential."

by Michael A. Backler

Like most successful businesspeople, locksmiths often keep an eye open for new products and new markets. But when they begin to look at their options within the access control business, many turn away. Even with the lure of rapidly growing markets for access controls—experts say it will reach \$750 million by 1995—many locksmiths have remained on the periphery, leaving the job of selling and installing access control systems to larger, more experienced installers.

Up until recently, stocking and selling access control products meant

major investments for installation training. It meant dealing with computer technology, and maintaining high inventories of cards for card readers. For locksmiths, it often meant too much effort for too little return.

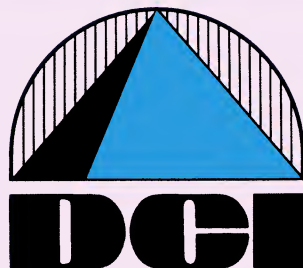
New Technology/New Opportunities. However, circumstances are changing. Recently, Ecco Industries of Danvers, MA, has added locksmiths to its growing list of dealers and distributors for its voice-based access control system.

According to one successful locksmith on that list, the system, called VoiceKey™, requires minimal training for installation, can be easily pro-

grammed and, perhaps most important, offers strong profit potential.

The system is comprised of two major components, a controller and reader. No host computer is required. Additionally, because the system uses only Personal Identification Numbers (PINs) and a user's voice, the need to manage, distribute and stock cards is eliminated.

The product is based on a proprietary technology developed by Ecco using Linear Predictive Coding (LPC). LPC examines the anatomical differences in speech and creates a geometric map of vocal patterns. By focusing on the characteristics that produce speech



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Ecco Industries, Inc. of Danvers, MA., a supplier of voice-pattern identity-verification technology to the security industry, offers its VoiceKey™ dealers and distributors the VoiceKey Power Package. The package provides a voice reader and controller, integrated with a power supply, transformer, battery wire harness and an enclosure for mounting.

rather than on the sound or pronunciation of the speech, accuracy is assured.

Individual's speech patterns are stored as templates in the system. When users seek access, they simply

enter their PIN on the VoiceKey keypad to pull-up their stored template, and then repeat a word of three syllables or more into the VoiceKey microphone. The sample is compared to the

stored templates, and based on this comparison, entry is granted or denied. When samples match, the stored templates are automatically refined, which ensures VoiceKey's accuracy.

Once one learns how to program the system, which takes less than an hour, new users can be enrolled in the system in about 15 seconds. Subsequent identity verification takes about one second.

Industry Concerns. In its recent dealings with locksmiths, Ecco has found that initial reservations on the part of locksmiths regarding marketability and installability are quickly resolved. The same people who call on locksmiths for their mechanical door hardware and who have been calling on other dealers for card-based systems, make up the market for VoiceKey. For the locksmith industry, providing these users with electronic door hardware in addition to mechanical hardware is the obvious next step.

Concerns regarding installation are also easily answered. Locksmiths currently marketing and installing the VoiceKey system say that if you can install an electric strike, you can install



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VoiceKey. Basically the installation process involves simple mounting of the units and the connection of a few wires.

Installation. The voice reader is placed on the outside wall next to the door that you wish to control, while the controller is placed on the "safe" side of the controlled door. The reader, which includes a keypad, microphone and light-emitting diode (LED) display, is 4½" wide, 9" long and 1¼" deep.

The component is wired to the controller, along with the power supply,

door strike, and any options, such as a door ajar contact, egress switch or a printer (which describes activity at the door).

The controller, which is 4½" wide, 9.2" long and .87" deep, has 24 terminal screws along its left side, used to make the connections to all other parts of the system. Each terminal is clearly identified.

After mounting the controller with four screws, a cable, normally Belden #8723, is connected to the appropriate communication, power and ground

terminals. This cable connects to the reader through a 1½" hole in the wall, drilled by the installer. On the outside wall, a reader mounting plate is placed over the wall opening, and the opposite end of the cable is attached to the reader's connector and plugged into the back of the reader. The reader is then mounted and secured on the mounting plate.

The next step involves wiring the power supply (12 or 24 volt DC) to the controller. The power outputs are attached to the appropriate main power terminals (positive and negative), while the ground wire joins the reader's ground wire on the chassis terminal.

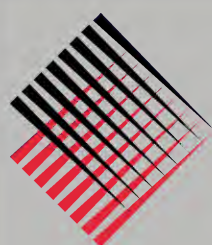
After powering up the unit to ensure proper connections, the electric door lock (12 or 24 volt DC) is connected. Depending on the type of electric lock—solenoid operated bolt/normally open switch or electromagnetic door lock/normally closed switch—connections are made to the appropriate lock and power terminals on the controller. The controller also allows for door lock connection to external power sources.

For users requiring control on multiple doors, up to eight controllers can be networked through a daisy chain format. The controllers are connected using cable such as Belden #9841 between three terminals on the controller: chassis, network A and network B.

To make the installation process even simpler, Ecco recently introduced its VoiceKey Power Package. The package integrates a power supply, transformer, battery wire harness and an enclosure for mounting. Previously, dealers and distributors were obliged to supply components beyond the controller and reader. While they can still purchase a controller/reader package alone, the new Power Package reduces inventory needs further and standardizes installation.

From the time when a locksmith, or any dealer and distributor, makes the agreement with Ecco to market VoiceKey, the company works closely with the business to deliver the support required. Initially, Ecco works with the distributor to ensure that installation and programming procedures are understood. And throughout the relationship, Ecco works to assist its distributors in recognizing and capitalizing on marketing opportunities.

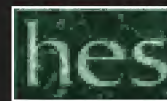
For more information contact: Ecco Industries, Inc., 130 Centre Street, Danvers, MA 01923, (508) 777-7750. ■



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Profitable Ideas

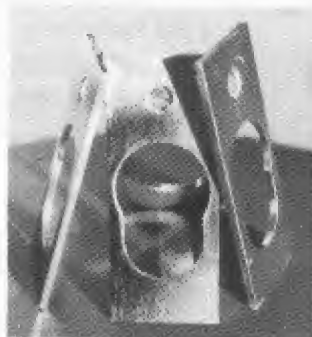
New &

Following are a number of interesting ideas you might want to consider for your business. You should always remain open to new ideas and products that might help you profit more. Under each product item there is a Rapid Reply number. On items that interest you, circle the number on the Rapid Reply Card. You will then receive literature on those items which you have requested.

Aable Locksmith's New Spacers

Frank Markisello of Aable Locksmiths has now developed spacers for the Inter-Lockit universal cylinder protector. This spacer will now enable you to use the plate even when the cylinder is protruding out too far from the door. This happens when some 6 and 7 pin cylinders are used for security and master keying systems.

The installation is fast and simple. You only need one 5/16" hole through the door, regardless of the lock mortise cases.



Adams Rite 3077 Lever

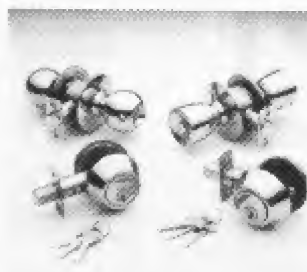
The Adams Rite 3077 entry lever trim is available in a full range of finishes. The lever height from the door is 3 3/4". The length of the lever from the pivot is 5 3/4". Clearance from flush door surface is 5/8".

This aesthetically designed lever is UL listed and available for use with Adams Rite's new 3000 Series fire-rated exit devices.



Abus Introduces Lockset/Deadbolt

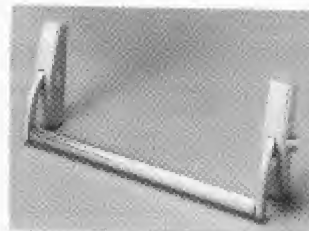
Abus Lock Co., recently introduced a new residential/commercial Lockset/Deadbolt Series for the construction and replacement market. Available in the Schlage keyway, this entire line is of durable solid brass and steel construction. Popular tulip and contemporary ball-shaped knobs are offered in brass, antique brass and stainless steel finishes.

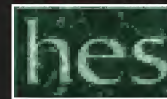


American Shield Cross Bar Device

American Shield Corporation offers a line of heavy-duty, narrow stile cross bar devices for wood, hollow metal, and narrow stile aluminum doors.

U.L. approved for accident hazard applications, the JPM 8000 series rim devices are stocked in aluminum and duranodic epoxy finishes, and are also available in stainless steel and custom colors. All devices are furnished with an oval cross bar made of stainless steel. The tube's unique design prevents the problems of rotation and noise which are common with cross-bar devices.





Cansec Systems' SmartLock™ III

Cansec Systems Ltd. is pleased to announce the introduction of the SmartLock™ III stand-alone programmable card reader.

It is fully self-contained and does not require a separate control unit. The reader supports 999 high coercivity mag-stripe access cards. Individual cards or blocks of cards can be easily voided/validated through the use of programming cards. All card data is stored in non-volatile memory to prevent its loss in the event of a power failure.



Certec's New Cleaning Lubricant

Certec, a Division of Certified Products, has introduced a unique lubricant, Super Slick Slick Stuff. It lubricates, penetrates, cleans and protects in a wide range of applications.

Super Slick is excellent for use on locks. Many lubricants contain paraffin oil with wax which builds up quickly, producing a gummy dirt and moisture attracting surface. Super Slick contains no paraffin oil and is an ideal lubricant for all locks.



Code-Alarm's Security System

Code-Alarm, Inc. has unveiled the Auxiliary Power Supply, (APS-1). "As the first uninterrupted battery back-up of its kind for vehicle security systems, APS-1 takes over when the vehicle battery is not functioning correctly, for any reason," stated Marshall Mueller, Vice President of Code-Alarm.

The APS-1 is continuously operational. If an attempt is made to disconnect a vehicle battery, the alarm will sound for one minute and then re-arm itself with the APS-1.

This small unit is easy to install and can be fitted under the dashboard.



CSI Introduces The VDP-1000

Components Specialties, Inc. of Lindenhurst, New York announces the first offering in its new line of security products, the VDP-1000 video door-phone intercom system.

The VDP-1000 is an easy-to-install system, for any security installation. The unit includes an outdoor camera unit enclosed in a steel box for surface mount and a flush mount plate for in-the-wall installation. The outdoor camera unit also features automatic lights that go on with the camera when the buzzer is pressed, or when the monitor switch on the indoor unit is activated.



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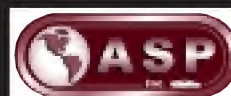
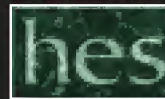
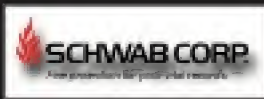
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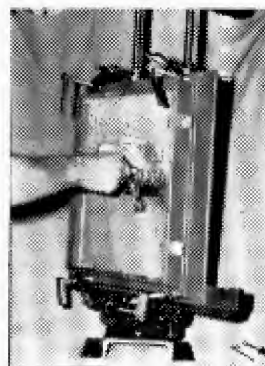
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DBD Adds Jig To Line

DBD Enterprises adds another jig to its line of tools for the safeman. The model two is a smaller version of the model one jig except that it is not capable of handling rectangular safe doors. It is strictly designed to hold small round safe doors while a technician performs work on the door.

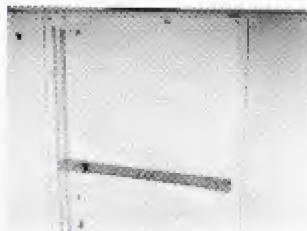
The model two has a fixed table and holds the safe door in only one position without tilting.



Door Lock Co.'s Locking Device

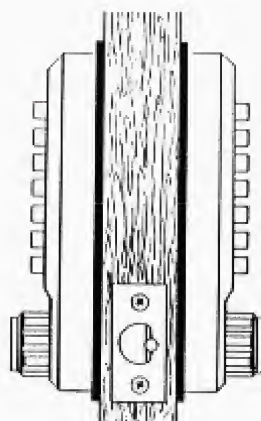
The Door Lock Co., Inc. offers the "Secur-A-Door Lock." Most exterior metal passage doors need additional locking hardware. To meet this need, 2x4's with brackets or a metal bar are currently used. With the Secur-A-Door Lock, a unit is permanently affixed to the door eliminating the need to remove and replace the cross bar every time the door is opened (unlocked) and closed (relocked). The unit also adds additional strength to doors.

The Secur-A-Door-Lock comes in two models allowing the dealer one stop sale/installation.



DSI's Digital Door Lock

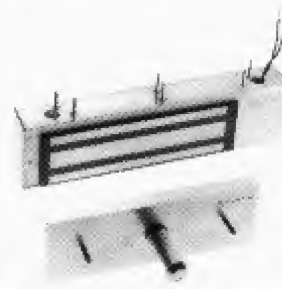
The newest addition to the Digital Door Lock Line from Door Systems Inc. is the Double Combination Digital, suitable for french doors, glass-paned entry doors, security gates and fences, banks or for any double combination application. It's available in 10 finishes, as well as any split finish combination, for all types of doors 1-3/16" to 2-3/16" thick.



DynaLock Corp.'s Magnetic Lock

DynaLock Corporation has introduced the 3000 Series electromagnetic locks with an advanced one piece design that allows for conversion from left to right hand units and to top jamb mounting while operating on 12 or 24 volts.

This translates into a more universal lock always matching the door swing and positioning the powerful coil assembly at the vertical lock jamb, and when used in tandem secure a pair of doors, whether they swing in or out.



KTE Markets Entry/Alert

A low cost battery-operated security device called Entry/Alert which converts an ordinary door-knob into a highly sensitive burglar alarm has been developed and is being marketed by KTE Company.

This palm-sized door-knob security alarm requires no wiring or installation. It simply hangs on the inside of a door. When turned on, it sets up a "detection field" in and around the metal doorknob.



ESL 2000 Series Control Panels

ESL's 2000 Series of modular fire alarm control panels accommodate 1-25 zones of protection. The 2000 Series panels provide the system design flexibility required for fire alarm applications in small and medium-sized installations.

Available in five cabinet sizes, the 2000 Series' plug-in modular construction facilitates low-cost installation and quick field servicing. Interior snap tracks permit easy installation of terminal boards and plug-in modules.



4-M's Economical Vehicle Security

A new line of vehicle anti-theft devices has been announced by 4-M Industries, Inc.

Beamed at the "low end" of the market, price-wise, the patented devices are easy to install, completely passive and fail safe. They place no drain on the vehicle's battery.

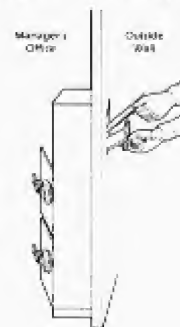
The units work on the principle of disabling the ignition system of the vehicle. A prospective burglar cannot start the protected car by any method of jumping or hot wiring—or even with the owner's key. An optional accessory is a warning siren which also serves as a panic alarm.

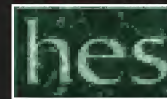


Gardall Safe's New Depository

Gardall Safe Corporation has introduced a new line of back loading depository safes. The new models are manufactured with a "B" rating and can be purchased with either a single or double door, using key or combination locks.

The depository is located on the outside wall and the safe doors are located in the manager's office. This application allows store managers additional security when counting deposits, making change or cashing out.





Hand Tool Ind. Tool Kits

Hand Tool Industries' introduces their new stock line of soft side zipper type tool kits.

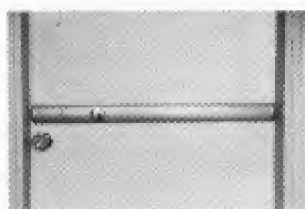
The new line of soft sided tool kits are designed specifically for those service engineers and technicians who are servicing telephone systems and equipment, copiers and other business machines, computers and other data processing equipment, and comparable types of electro-mechanical devices and equipment.



Iseo Locks's New Security Bar

Now from Italian designers comes The PerfectaBar, a powerful double deadbolt in a choice of four decorator colors: White, Gold, Silver and Bronze. Also available in 24kt gold plated at an extra cost.

Engineered for the utmost in security, requiring 2,500 pounds of pressure to by-pass, The PerfectaBar is made of high quality materials; chrome plate steel and brass parts and bronze springs to resist corrosion and provide dependable, smooth operation.



Kano Laboratories Offers Penephite

Kano Laboratories, Inc., offers Penephite, a specially-compounded lubricant designed for tough jobs.

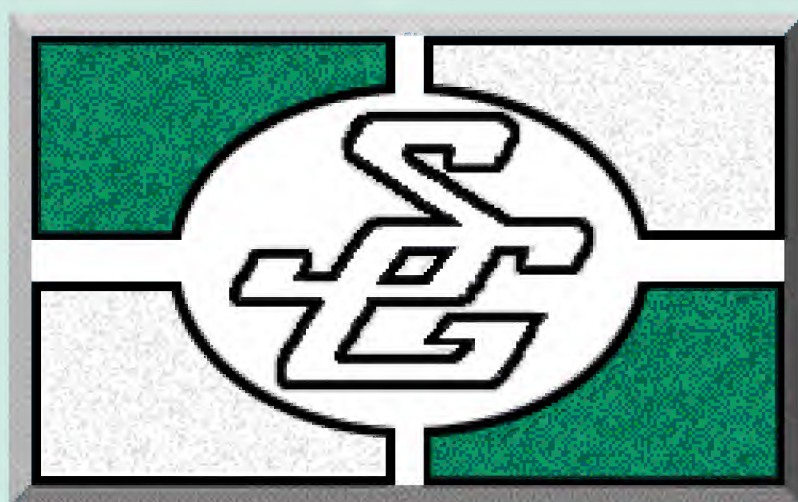
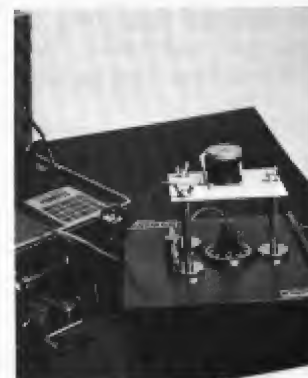
Penephite is a combination of oils, solvents, and micron-size graphite in colloidal suspension. Its special formula carries graphite into minute spaces where it adheres to metal and leaves behind a lubricating film, making it ideal for loosening leaf springs, locks and hinges, and protecting against rust.



Lockmasters' Computer Dialer

The ITL-1000 computer operated automatic dialer opens safes independently, leaving you time for your regular work schedule, saving time and excess labor cost.

Bring the advantages of electronic technology to your business. Hundreds in use worldwide.



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Comptronic locks your choice for
electronic safe locking solutions.***

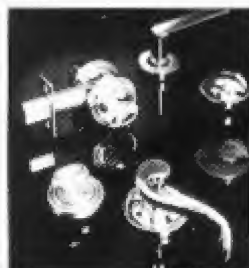
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Midland Supplies Baldwin Deadbolts

Midland Hardware Distributors of Oakland, NJ offers Baldwin deadbolts. Made of solid forged brass, they are offered with a selection of turn-pieces and a variety of finishes to be compatible with lock trims on the market.

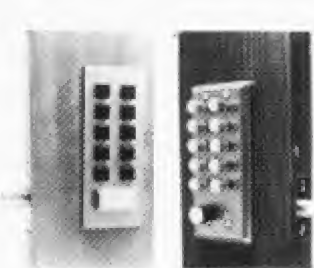
They are made for standard door sizes and standard-to-the-industry installation. Available with single or double cylinders, these deadbolts are Baldwin's first-ever deadbolts featuring 1" tamper-resistant concealed pins and security strikes.



Preso-Matic's Two Sided Locks

New two-sided combination locks from Preso-Matic keyless locks unlock by combination from the inside and outside of the door.

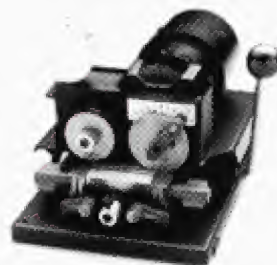
The exterior of the door is unlocked in the same manner as the standard Preso-Matic pushbutton locks. It unlocks automatically when the last digit is pressed. The interior also unlocks by combination, by pulling the button knobs in the proper sequence. The bolt retracts automatically when the last digit is pulled.



Precision Products' New Key Machine

The "Formula One-Plus-One" manufactured by Precision Products, Inc. is an accurate and quick duplicator and a precise code cutter.

The style and functional design make it a very affordable key machine. Optional equipment available includes a 12-VDC motor, flexible work light, and a simple-to-use code card maker kit.



Pro-Lok Sends Auto Update

Pro-lok introduced its Auto Encyclopedia "the original" a few months ago. The company is now in the process of mailing all registered owners a free 120 page re-print of the lock out section.

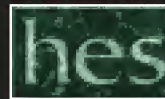
This section now not only includes complete information on key blanks, code locations, code book reference but also includes foreign car service reference and detailed drawings. The first update will also be available this month making the encyclopedia over 300 pages.



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RAM Corp.'s Radar Watchdog

RAM Corporation introduces the Radar Watchdog. This new radar device detects any intruder's motion through solid objects, such as wooden or glass doors, windows and walls or fences. When set off, it automatically activates itself to emit fiercely savage barks.

At first contact, Radar Watchdog only barks once. When the intruder moves again in any direction, it begins barking again and continues in a frenzy of ready-to-attack barking as long as the intruder keeps moving.

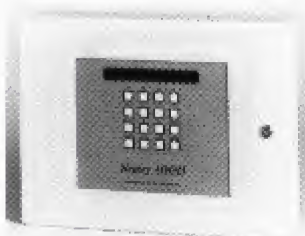


Reliable Security's "Lock Manager"

Reliable Security Systems has introduced a new microprocessor based system, doorGuard® Sentry 1000. This computer based system allows for total lock management of emergency exit, perimeter, and interior doors.

The simplicity of Sentry 1000 provides users the ability to simply and quickly control the status of all electric locks.

Factory programmed to comply with all codes, doorGuard® Sentry 1000 is designed for interfacing with existing computers.



Sandstrom Prod. Lock Lubricant

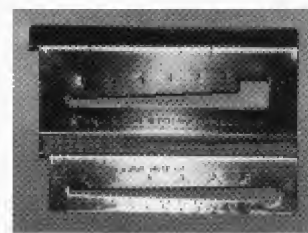
Sandstrom Products Company's Poxylube CP-200 dry film lock lubricant keeps things moving in your locks. It provides lubrication through the use of PTFE technology. The product contains no graphite, is colorless, dries fast, and will not run off. Also, it's clean and will not gum up the works with contamination from dust or debris like oils or petroleum type products.



Wm. Silver Supplies WS200 Decoder

William Silver & Co. Inc. announces the availability of the WS200 Decoder for Medeco's biaxial system. This easy-to-use tool will enable service technicians to decode biaxial keys accurately and quickly. The gauge "reads" the angles, depths and most importantly, the spacing. Further, it can be used for decoding to rekey additional cylinders as well as the old Medeco keyway.

The WS200 decoder is made of stainless steel for durability while being light enough and small enough to be carried in the pocket of a workshirt.



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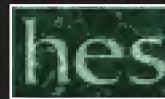
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Slide Lock's Release Forms

Fifty sets of two-copy carbonless field forms protect the lockout technicians from undue liability. The forms, available from Slide Lock Tool Co., cover such situations as deteriorating weatherstripping and previous opening attempts—a basic checklist of things to look for before attempting a vehicle opening.

It includes a space for the authorizing party's signature, driver's license number and vehicle I.D. number.



J.J. Tourek's New Cobralinks, J.R. 1™

Recently introduced by the J.J. Tourek Manufacturing Co., is the Cobralink, Jr.™ This addition to the family of Cobralinks locking systems offers security for bicycles, tool boxes and other small property.

Special features include: personal numbered key; rust-resistant locking mechanism; case-hardened steel "cobra head;" body of chrome-plated; hardened steel ball-joint and link design; and protective nylon mesh.



New Software From Treskat

Treskat's popular line of Macintosh software for locksmiths is now available for owners of the Apple Macintosh computer.

Programs include Perfect Master III, Perfect Code Buster, Perfect Inventory, Keytrax and Perfect Key Cross II. The Perfect Pal for locksmiths offers five programs: spaces and depths, mail list data base, equipment inventory control, type writer and inventory label maker.

The Perfect Key Cross II is a complete key cross reference book on disk.



Wilson Adds New Safe Line

Wilson Safe / Philadelphia Star introduced a new line of office/home safe, rifle cabinets and special wall pistol safes, into their large inventory of safes.

The office/home safe features a ½" steel plate on the door, Steel Body 3" concrete filled, fire rating at 1562 F, S & G combination, lock, hardplate protecting lock, spring-loaded relocker and 1" locking bolts. The gun cabinets feature ¼" steel plate on door, carpeted rifle rack and floor, S & G combination, hardplate, relocker and 1" bolts.

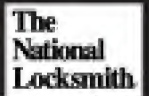
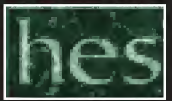


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New HPC Products

"The company has recently released three new products to complement their line. Included are the Key-Release, new Kekab display and KeyCards."

HPC has recently introduced several new products to complement their full line of locksmith related products. The Key-Release is a handy, consumer packaged key holder. Each one has five key rings, and each ring will easily hold two keys. The indi-

vidual display. It neatly shows off the product and demonstrates its applications.

Also, HPC has brought to the market an emergency key card. This is a plastic key which snaps onto a credit card sized holder and fits neatly into a wallet or purse. Thus the custo-

mer can be protected against lockouts.

The cards are available bulk packaged or consumer packaged for impulse sales. The HPC KeyCards, as the product is called, are packaged to sell themselves. The package is strong, attention-compelling, and clearly



New color packaging for Kekabs helps to create point-of-purchase sales.

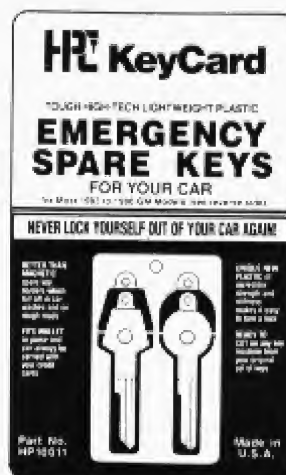


The HPC Key-Release is an impulse item, individually carded.

dual rings may be easily removed from the Key-Release whenever desirable.

The Key-Release is a profitable and economically priced impulse item. It is attractively packaged so that the product will actually sell itself. The stock number is KRB-1. It comes individually consumer carded, 24 per case, containing six each of red, white, blue and black.

For the first time, HPC offers a new four-color merchandising package for the Kekab line of key control cabinets. The package itself displays the applications of the product. Plus the graphics will create an impulse sale when sales personnel are not present. Also available is a new Kekab point-of-purchase



KeyCards are available for most cars. They are easy to sell.

explains the concept of the KeyCards at a glance. Key cutting directions are on the back of the package.

Many drivers will want to purchase more than one set for other family cars, especially since the price is so reasonable. Plus the locksmith will profit in two ways. First, there is the charge for the KeyCard itself. Then there is the additional charge to cut the keys.

HPC KeyCards make it unnecessary to carry a varied inventory. Only a few blanks are required to cover the most popular automobiles. And a complete stock uses very little space. KeyCards are made of a new high-tech plastic which is incredibly strong making it easy to turn in any lock. ■

G.M.'s New Geo

"This series of cars is sure to be a hot topic of discussion for a while. After researching, I found that each model uses its own code series."

by Robert Sieveking

The "Geo" by Chevrolet is sure to be a topic for discussion in lock and key circles for the next few months. After doing a considerable amount of research into the keys and codes for the Geo line, I found that each model uses its own code series. (See chart 1.) The code series for the Prizm is G001 to G7G0.

on the passenger door cylinder. There are no glove box locks or internal locking compartments on any of the Geo vehicles that I inspected. All Geo vehicles are *one key fits all locks*. Unlike the Honda and Acura autos, there are no codes on the ignition lock housings. The Prizm has a remote trunk release, so the trunk lock will most probably be the best place to



2. The Chevrolet Geo line Prizm.



3. The Metro.

Chart 1	Code Series	Curtis	Ilco	Taylor	HPC/Silca	1200 CM Code Card
Geo-Prizm	G001-G7G0	B72	TR40	X174	TOY 38R	XF88
Geo-Metro (Suzuki, Swift)	U1-U2000	B70	B65	X184	GM19	XF88
Geo-Tracker (Suzuki, Sidekick)	18100-19299	B69	B69	X180	GM18R	XF89

The Prizm code series is unique, in that it uses letters and numbers interchangeably within the series. For some reason, the letters do not follow in alphabetical order within the code series, which makes the codes a little hard to follow.

The G001 to G7G0 codes are cut on a B-72 (Curtis) TOY 38R (HPC/Silca), or X174 (Ilco) blank. The Curtis B-73 blank is a B-72 with a "#4 cut" (deepest) precut in the first space next to the shoulder.

The 1200CM code card to use with these codes and keys is the XF-88. Be prepared to spend an extra few dollars when you order the XF-88 code card, as there is a new cutter that must be used with this card. The same cutter is also required for the XF-74 code card (88/89 Honda Civic).

The table in chart one shows the code series and key blanks for the other Geo vehicles, along with the appropriate 1200CM code card to use. The table will be handy when the new code cards become available this month.

Codes for the Spectrum, Metro and Tracker are contained in code books from *The National Locksmith*. Prizm codes will appear in the upcoming update. Also, Curtis, has a Geo code book, part #20484. Use only Curtis' version revised February of 1989.

The codes for the Metro are found

either remove the lock to make a key or find the code.

Opening procedure for the Metro is the same as for any "slide lock" type vehicle. *Do not hook the lock actuator* at the cylinder, as the actuators on these locks are of the fixed type. Wedge the drivers window 10" from the rear of the door. You will find the slide linkage about 1½" below the level of the outside pull handle and about 8" from the rear of the door. Carefully hook the linkage from below and slide it toward the front of the car to open.

Opening procedure for the Prizm is the same as for all vertical linkage type auto locks. *Do not hook the lock actuator* at the cylinder, as the actuators on these locks are of the fixed type. Wedge the driver's window about 8" from the rear of the door. Follow the vertical rod down to the lock mechanism, with the X tool to the front of the button rod. As you reach the bottom of the button rod, allow the X tool to slip under the locking arm of the lock box and *gently* lift the arm to raise the button and unlock the car.

The Prizm (see photograph 2) is a four door Geo, and is assembled in California. The Prizm replaced the Nova. The Metro (see photograph 3) is a two door body, imported from Japan. The Metro shares the same locking systems and code series as a



4. The steering column for a Geo Tracker.

Suzuki Swift. The Geo Tracker (see photograph 4) relates in the same way to Suzuki's SideKick, imported from Japan. It a 4-wheel drive vehicle.

For now, that's about all there is to tell about the Geo by General Motors.

FLASH...for those who have X128 keys on the board for the Honda. The best thing to do with these blanks is to destroy them and replace them with the new X181 or HON47 (HPC/Silca). The length of the new blank is slightly greater than the X128. If you use the X128 in a 1989 Honda or Acura auto, you run the risk of having the key jamb in the "start" position. If this happens, the starter will crank until it burns up. The ignition lock will *hang* or jamb in the start position.

The X-172 has the same problem. Replace all X-172 blanks with X-182 or HON 45R (HPC/Silca) blanks. ■



The Laughing Mosler

"Through the safe amplifier I could almost hear a chuckle from deep inside this giant. On the other hand, maybe it was only the customer."

by Robert Sieveking

The day began much like any other, with the initial scheduled calls and a few emergencies. Halfway through the morning, the dispatcher called to say there was a safe locked up in the basement of a house that had been sold, and the owner wanted it opened to make sure that the family treasures wouldn't be left behind. My schedule was pretty full, but I said I'd run by to give the job a look. When I got there, I met with the owner, who led me to the basement of the old house to view the safe. One 40 watt bulb, dimly illuminated the coal bin turned workshop where the cast iron brute had made its home since the late forties, according



1. A Mosler safe encountered on a service call.

to the owner. (See photograph 1.) He told me, the last time he had seen the safe open was when he put his baseball cards and coin collections away before leaving for active duty during the Korean Conflict.

Surprisingly, the dial worked freely, except for a little binding of the dial on the dial ring. A few taps with the mallet and the binding disappeared. Rotating the dial slowly around left, a contact point was located at about "7." Right rotation of the dial gave no indication of a contact point at all.

My first impression was that I was working with a Yale friction fence type lock. The dial and dial ring suggested Yale, but the knob did not bear the



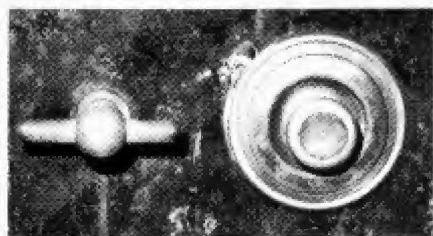
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manufacturer's name. Note in photograph two that there are two indices on the dial ring, one of which has an "O"



2. The dial and dial ring found on the Mosler.

stamped over it, which is the opening index. The second index is 25 numbers to the left of the opening index and has no special significance.

My next step was to try to determine the number of wheels in the lock. The wheel pack was parked at all wheels left 50 and right rotation of the dial was begun, to count the wheels. Counting the wheels as they pick up is usually a pretty easy step in the manipulation, but this lock gave so much gear clatter that the pick-up points were barely discernable over the noise. There was

also a grinding noise as the dial was turned, evidence that rust particles were grinding somewhere in the spindle bearings. Believing the lock to be a three wheel Yale friction fence, I began a graph of the wheel pack with an all wheels right evolution, every 2½ numbers.

The first graph was run, with very little deviation of the single contact point. (This lock only exhibits a right contact point, with left rotation of the dial.) An auxiliary lamp was rigged above the safe and I settled down for some serious concentrated effort, as the customer paced and quietly endured the anticipation of again viewing his baseball card collection.

After the second graph of the lock was run, and having expended about three quarters of an hour on the safe, I was still right where I had started. No provable indication of a gate had revealed itself in the graph.

I pride myself on the fact that I can manipulate most of the safes that I run across, so that pride drove me to run one more graph of the lock. The graph did not show a deviation of the wheel pack, over an eighth of a number, and the gear clatter and grinding rust particles were beginning to get a little irritating to my ears. Through the safe amplifier, I could almost hear a chuckle from deep inside this cast iron giant. Maybe it was only the customer, who from time to time would peer over my shoulder to see if I had made some new discovery.

A little over an hour, into the job I slid my tool away from the safe and announced to the customer that this was a pretty good old safe, and that drilling the door would probably be a faster and more economical method of opening it.

Believing this to be a Yale lock, the door was center punched outside the dial ring, at "87." This would put the hole slightly above the drop-in, without coming in behind the fence gear or bolt body. Judging from the weight of the safe, having rolled it into the center of the floor for better light, I judged the door to be about 4" from the face of the safe to the back of the lock case. The drill was angled to penetrate the lock case about 1" from the center of the wheel pack and the door was drilled, using a standard ¼" high speed bit. This safe had an ⅛" skin and about 4" of fireproofing material, followed by a ¼" cast iron plate separating the lock case from the face of the door.

Before penetrating the lock case, the



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bit was exchanged for a new one of the same size. The lock case penetration was done very carefully, so that the drill did not enter the lock or damage the drive gears. It must have been my lucky day, because the hole was almost perfect. The gate of the drive cam was clearly visible as the dial was rotated. I was into the lock case without damaging the lock. The problem here was that the angle of the hole was not exactly right to sight down the edge of the wheel pack to find the gates. Switching to a $\frac{3}{8}$ " drill, the hole was enlarged very carefully through the lock case. This gave me a clear view of the wheels.

My first discovery was that this was a four wheel lock. Using a borescope, the edges of each wheel were aligned with the drilled hole, carefully recording the combination as the wheels were positioned. This gave me the wheel alignment combination.

The next step would be to waltz this

gate around left until the fence dropped in and the safe opened. By adding numbers to the combination, the gates are moved left, so adding one to each number of the wheel alignment combination the new combination was run. The safe opened in the fifth trial combination, by adding five to each number of the wheel alignment combination. The door bolts were retracted, and as the door swung open, a look of disappointment crossed the face of the anxious customer, as he realized that the ball players of days gone by were

only memories. The safe was empty.

Once opened, the inside of the door, led me to believe this was a Mosler fire safe. (See photograph 3 and 4.) Identification was confirmed in volume II of *The National Locksmith Guide to Safe Opening*, page 151.

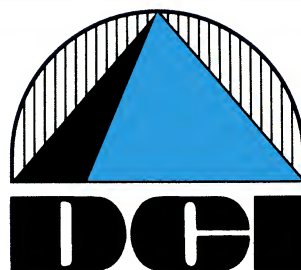
Though the manipulation attempt had failed, the safe was opened by penetration in about 20 minutes. The measure of a lock's worth is in its ability to resist manipulation. The four wheel Mosler friction fence lock is truly a formidable lock. ■



3. Opened Mosler fire safe...



4...with a close-up of the lock mechanism.



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Servicing BMW Motorcycles

"One look at the ignition was all it took for us to realize that this was a new one for us, and it was going to take more than a few minutes to make a key."



Send your lock and key questions to Jack Roberts, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Jack Roberts

Certainly there are not a blue million BMW motorcycles running around the country, but there are a few of them out there and the interesting part of our profession is that we never know just what service we will be called upon to perform with the next phone call.

Our shop regularly services motorcycles of all types and our normal practice is to document each new lock that we encounter with notes, sketches or photos and then enter pertinent information in our data base for future reference. It could be months or even years before we may encounter the same lock again and the old memory just isn't capable of instant recall of certain required techniques for those once-in-a-great-while service jobs.

When the BMW store called and said they had received a new bike with no keys and were sending the ignition lock to the shop we dug out the records and were ready to quickly turn the job

around. There seems to be a way for the best laid plans to get screwed up, particularly when you figure on a job going smoothly, and this was one of those times when the smooth got rough.

One look at the ignition was all it took for us to realize that this was a new one, for us, and was going to take more than just a couple of minutes to accomplish the job of making a key. A close examination did not reveal a code number, poke hole, retainer screw or anything that could be construed as a means of disassembly. There was a glob of red goop located about midway on the cylinder housing so we started digging away with a dental pick.



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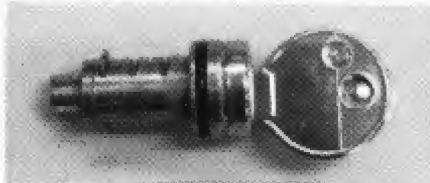
I don't know what kind of stuff they used but it was really hard and took some digging to reveal a hole (see photograph 1), and then some more digging to locate the slot of a screw. This was a teeny tiny screw; so small that a pocket-sized screwdriver was much to large, so we tried a #6 jeweler's screwdriver. The goop in the hole had that screw stuck tight so we ground the tip of a broken Snap-On and were able to remove what was indeed a retainer screw, but the plug didn't want to move. We tried poking in the hole and probing for a spring-loaded retainer but there just wasn't anything there.

Quite by accident with all of the handling of the assembly, the housing separated (see photograph 2) and there was what we had been looking for. The rear half of the assembly contained the cam and electrical contacts and the

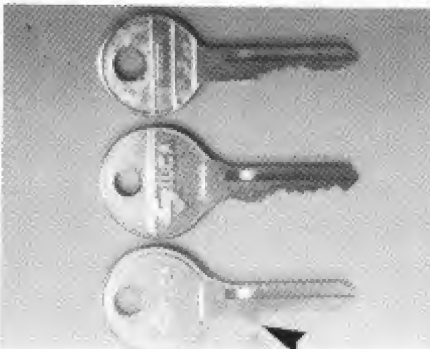
front half contained the plug. The plug retainer is easily visible (see photograph 3), and can be depressed with any type of pointed instrument allowing removal



2. Separated lock housing.



3. Plug retainer, removed from housing.



4. Original and modified NE5 and a Nieman key blank.

of the plug from the front of the housing.

This is a Nieman ignition and takes a Silca NE62 blank although the Silca NE31 can also be used. We didn't have either of these blanks, but discovered that a Silca NE5, (B69K Taylor; SR61N Ilco; N2M Old Ilco) would serve very well by removing 3/32" from the shoulder which allowed the blank to fully enter the plug. Photograph four shows an original NE5 at the top, the modified NE5 in the center, and an original Nieman key at the bottom. We inserted the blank, read the wafers, cut the key and another bike hit the road.

The spacings for this lock are: .140, .245, .350, .455, .560. The depths of the cut are: 5=.240; 4=.225; 3=.205; 2=.185; 1=.165. Note that a #1 is the deepest cut and that a #5 is a no cut. If a code number should be encountered it may have six digits with the last digit a "0." Ignore the "0," reverse the code and cut bow to tip.

Motorcycles are a good source of income and if you are in a climate that has a "riding season" the time to get the word out that you make bike keys is early in the spring. Let a few riders know and they will spread the good word to the rest of the group. ■



1. Poke hole found on a BMW motorcycle ignition lock.

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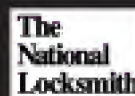


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The Broken Drive Cam

"The unit was five years old and had never been serviced by anybody. It still had the original combination on it. That's how the problem started."



by Dale Libby

Recently, I came across a broken drive cam at a large discount chain store. It was a rather surprising malfunction, for I had never seen anything like it before. The call came in on a Sunday morning with the usual plea. "We cannot get our safe open...and we need it open right away so we can get the store open."

Part of the psychology of being a safe technician is to try to calm the store manager, and tell them they might have to get some money from a sister store, or from their armored car company to open the store. I was at least one hour from the store location and the store opened in 30 minutes. After explaining this, the store manager calmed down enough to discuss payment terms.

I always discuss payment procedures and credit requirements, especially in emergency and Sunday work. Once I determined that the safe was an "A & B" type money chest (which is manufactured in Chicago) with a combination lock, both the manager and I came

to an agreement on payment procedures, with the understanding that the cost of any extra parts or new lock needed would be in addition to the price that I charged for the opening and door repair.

The chest was an A&B unit and the dial spun freely, though I could not pick up any contact points or feel the wheels. The dial was properly tight with the correct amount of end play. My first thought was that the spline key had come loose (almost impossible on newer safe locks), but this would mean that when the dial was turned to the right, it would tighten up as the cam tightened up on the spindle. This was not the case.



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My second idea was that the drive cam stationary fly had sheared off the drive wheel or cam and was not contacting the wheel pack, because I was not picking up any wheel action at all. I proceeded on this assumption, but there was still a doubt in my mind about that, because I was still not picking up any contact points anywhere on the dial, no matter how the lock was splined. (If the lock is splined incorrectly, then the contact points could be in one of three different positions, depending on how it was splined—VU, VD, LH or RH).

A&B and other manufacturers, like Mosler and Johnson Pacific, have over the years, used the combination lock bolt for purposes other than that of blocking the movement of the opening handle cam. Most round door floor safes share a similar type of mechanism for moving back the lock bolts. This mechanism is the withdrawing of locking bolts connected to the combination lock bolt directly.

Mosler used the infamous "hook" bolt to accomplish this in their round door lug chests. The combination lock bolt was a hook in shape, and fit into a groove in the active bolt. The hook bolt also held in place an inner bolt relocker on the active bolt which would activate if the lock cover was ever punched. Simple and diabolical, but effective.

The A&B unit was a little different. It used a LaGard 3300 combination lock with an extended bolt. (See *photograph 1*.) A hole was drilled and tapped in the end of the bolt with a round-headed screw which extended through the bolt about $\frac{3}{8}$ ". This screw fit into a hole of the specially milled locking bolt bar. This bar is massive by comparison to the combination lock bolt.



1. The normal drive cam of the LaGard 3330 combination lock.

So again, we see a "double duty" arrangement of combination lock. The last turn of the dial would pull in the combination lock bolt which is attached with a screw to the massive locking (blocking) bolt. Unfortunately, this

bolt should have been lubricated when the unit was serviced.

The unit was five years old and still had the original combination on it. It had never been serviced by anyone. This is probably where the problem started. If you are ever called to service one of these or similar units, take the time to check to see that everything is lubricated correctly.

I thought that the fly had been sheared off by either spinning the dial, or by having a sticky lock bolt which put too much pressure on the fly when the unit was being opened. Anyway, I proceeded to open the unit, but ran into a little surprise.

The opening was accomplished rather quickly, but with a few odd turns. I pulled the dial with the Lock-

masters Dial Puller which works quite well. I then drilled at 97 (the appropriate distance from the dial spindle) to hit the position where the fence drops into the gates of the wheels. I thought that possibly I could probe the wheels around to the drop-in position and then turn the protruding spindle to open the unit.

The hole was drilled quite easily because there was no hardplate on this particular unit. I was right on for the opening that I wanted to do. I looked into the hole with my otoscope and saw the end of the fence perfectly. Perfect alignment, perfect position, for the wrong opening. The first hint of trouble was that when I turned the protruding dial spindle around completely, I did not see the lever and fence bump up

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as it would do when being turned. The spindle turned, but the lever and fence did not move. (See photograph 2.)

If the stationary fly had broken off, the lever would have moved. The only other alternative was that the drive cam was somehow messed up. I had never seen a drive cam split and broken in half before, so I did not even envision it. (See photograph 3.)

Since the lever was not moving, I had to bypass this type of opening, that of using the spindle and cam to open the lock. I stuck in a small ice pick, levered, and broke the fence off the end of the lever. I used the protrusion (lever stop) in the lock case against the lever, and it snapped easily.

Next, the lever disappeared from view. Usually the drive cam will support the lever, but the cam was at the bottom of the lock, and with nothing to support it but the inner drive spindle, I was now looking at a wheel pack and nothing else.

To withdraw the lever, I had to drill through the wheel pack with a quarter inch drill until I could see the end of the lever. I had to drill about 30 degrees down through my existing hole to get a clear shot at it. I drilled a small pilot hole in the lever, inserted my trusty ice



2. A broken drive cam with the spindle attached.



3. The split or broken drive cam.

pick, and withdrew the lever with no difficulty. I really did not see the split cam until I took the lock apart to figure out what went wrong. Anything can happen, and usually will at the worst possible time. (Thanks, Mr. Murphy.)

The repair on the safe door was easy. I inserted a hardened plug into the quarter inch hole, after reaming the hole with a tapered reamer, hammered and ground down the plug. This was done under the dial, so no repairs were seen.

The lock proved the easiest to work on. I used a new 3300 LaGard lock, but I exchanged bolts. I used the pre-drilled bolt from the old lock and put it into the new lock. The standard bolt length is not long enough; you need an extended bolt. (The same is true on safes that use a 4444 key type lock; the locking bolt is extended with a similar screw for withdrawing the blocking bolt.)

I then lubricated the blocking bolt slide with Safe Slick compound, and checked it several times. Any good grade light grease will work. Of course the customer wanted the original combination put back on the safe, so I did. The unit worked perfectly.

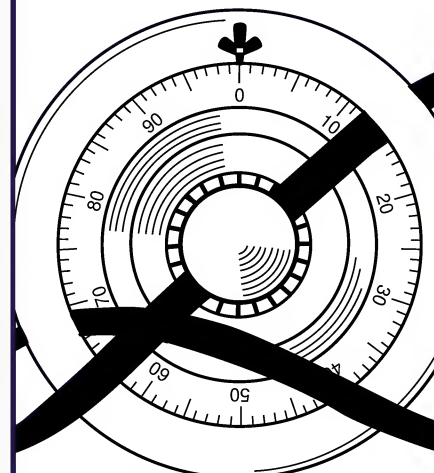
Continued on page 100

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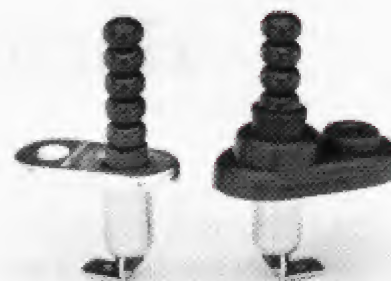
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Humor:

Finding 'Good Help'

"Choosing a new helper has always been very easy for me. I wait for something to float by and I grab it just like a water spider."

by Joe Locke

Someone told me a long time ago that I was a natural leader of men. Never mind that it was a group discussion on who was to go into the mine field first.

Choosing a new helper has always been very easy for me. I wait for something to float by and I grab it, just like a water spider. I have not had much luck hiring help in the past. It seems I always get the fellows that are on the way from the unemployment line to the welfare line. My luck had changed, however, when I had the good fortune to hire a guy named Harvey. His father saw me working on a car and asked me if I needed help. He told me how his son had won the Nobel Prize for good workmanship, along

with a doctorate in safe penetration and an honorary degree in attendance.

With such a glowing resume' ringing in my ear I told him to have Mr. Wonderful give me a call. I'm not saying junior was desperate, but by the time I had left his father and drove back to the ranch he was standing on my doorstep with a letter of recommendation from our state senator.

He had worked for the same wonderful boss that I used to have, and said that the only reason he left was because he felt that he made the boss feel inadequate and unnecessary, and could not stand the pain-filled look in his eyes every day he came to work.

You may wonder why I would believe such a tale. It was because that was the

same reason I left my old job.

Harvey was so clean-cut that I knew he must be a good worker. Everyone knows that the less hair on a person, the better worker he is. I hired him in at top dollar, because I didn't want anyone else grabbing such a valuable asset away from me.

After a week of training I noticed something different about Harvey. "Harvey!" I said, "Is it me or is there something different about you?"

"Mind your own business!" he snapped.

At that point I realized that I had overstepped my authority as a boss, and sought to mollify his ruffled feelings.

"Gee, Harvey, you are really doing



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great work. I wonder if you think you are ready for a service call by yourself now?"

"You can send me out if you want to, but I won't be responsible for what happens!" he said enthusiastically.

I sent him to change the combination on a Mosler safe, and did not worry at all until the manager of the store called me to say that Harvey was leaning on the safe fast asleep. He didn't want to wake him because Harvey looked so peaceful with his thumb in his mouth.

I decided that I must be overworking the poor guy, so I gave him the rest of the day off. I know that he really appreciated my kindness, because the next day he showed quite an improvement in his attitude.

"What do you mean by giving me so much work to do?" he demanded. "Yesterday I only had to work until noon!"

At this time I realized what was different about Harvey. He was growing a beard, and he looked like Mr. Potato-head with whiskers. "So you're growing a beard!" I said.

"Oh that!" he said. "I am going deer hunting in a couple of days and it is a family tradition for everyone to grow a beard before we leave."

"Even the girls?" I asked.

Ignoring my remark he asked if I had a problem with him going deer hunting for the weekend. I said no, but at the time I didn't know his definition of "weekend." A week and a half later he came back excited about going back to work.

"I hope it is slow today," he yawned. "I'm all tired out from sitting in a tree for a week."

"Don't worry," I said. "I'll give you time to re-adjust to the hectic pace of working 20 hours and getting paid for 40."

The phone seemed to ring with more call-backs and complaints than I was used to, but I figured that my customers were not giving Harvey an even break, or so he told me. One day it was a "Caddy Killer" that the Caddy fought with and won, with the tool stuck in the car for me to go fish out. The next problem was a panic bar that Harvey got in a panic over because he couldn't figure out how to put it back together. There were deadbolts that were defective from the factory (of course) and tools that would mysteriously grow legs and walk off.

Compared to some of the other guys I tried to hire Harvey was still a dream come true. He had a beard, but he trimmed it once a month. His truck was

always a mess, with all kinds of fast food trash on the floor, but he argued that he was just too busy to clean it up.

I was thinking that with the proper guidance and attention Harvey would become everything his father said he was. That was until his two-month trial period was over, and he decided to let me know he wasn't satisfied with my performance.

"You expect too much," he growled. "I have to have more money because I just bought a bunch of stuff. If you don't pay me more, I'll have to take my talent where someone will appreciate it!"

I said I was sorry, but I didn't deserve such a wonderful employee, and I hoped that he would find a job that suited his qualifications.

That was the end of the story until I got a letter from the unemployment office saying that Harvey had not yet found a position worthy of him and he was trying to get unemployment compensation. I saw the form that he filled out, and under the "reason for leaving last employment" he wrote "I felt that I made the boss feel inadequate and unnecessary, and I could not stand the pain-filled look in his eyes every day I came to work." ■

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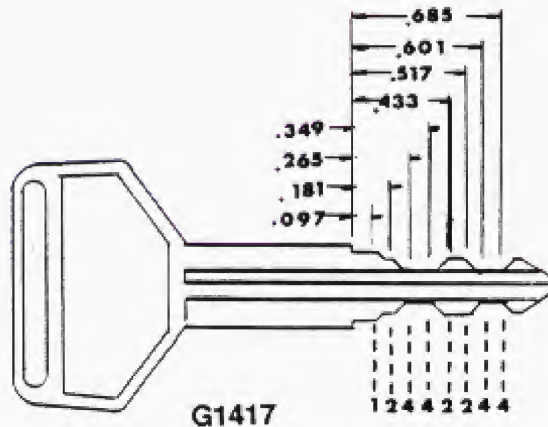
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Toyota Codes

W0001-2000

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DEPTHS

0 -	5 -
1 - 0.324	6 -
2 - 0.297	7 -
3 - 0.270	8 -
4 - 0.243	9 -

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Taylor X174



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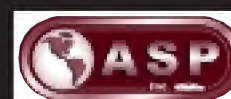
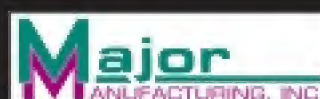
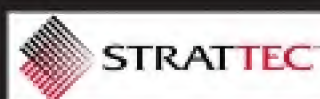
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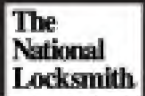


W0001-2000 TOYOTA

Keyblanks:

HPC/Silca TOY38R
 Taylor X174
 Curtis TR-40

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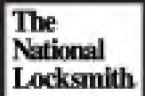


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Keyblanks:

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38 31224432	88 11322243	38 33112324	88 32423134	38 32112234
39 22233132	89 21332331	39 33113224	89 42112324	39 24342111
40 44432234	90 43313344	40 12332124	90 43212234	40 22211132
41 12442334	91 33312443	41 43233211	91 42332232	41 13132122
42 23433423	92 23422243	42 33434431	92 44213424	42 43322422
43 33242334	93 21311323	43 42322432	93 33443121	43 43331132
44 31132342	94 33424334	44 43332244	94 33443112	44 21243243
45 33232132	95 21243322	45 32111221	95 42433232	45 42342213
46 31322344	96 21133344	46 43422343	96 32342312	46 21132342
47 33322134	97 42442224	47 31233234	97 21132423	47 44313223
48 21133122	98 42323442	48 22443112	98 22433113	48 33442122
49 42422313	99 33322324	49 21334334	99 43122321	49 43432112
50 21213421	00 11323422	50 33212243	00 11134234	50 23431224



W0001-2000 TOYOTA

Keyblanks:

HPC/Silca TOY38R
 Taylor X174
 Curtis TR-40

0751	0801	0851	0901	0951
51 33234223	01 34223122	51 42243231	01 13444231	51 42132134
52 32321131	02 22113242	52 23424233	02 32344231	52 43222344
53 24423244	03 23423313	53 23323122	03 43133224	53 43443222
54 43223211	04 21324321	54 44432123	04 22311344	54 42133442
55 32243323	05 12223112	55 44213312	05 23421131	55 42134334
56 32442433	06 42243331	56 42432442	06 44422421	56 33121344
57 33122133	07 32433311	57 43131234	07 32133212	57 21122434
58 32113313	08 21224213	58 44431342	08 32322121	58 22124313
59 44213343	09 33434421	59 11331342	09 32112311	59 32322343
60 42243321	10 42343312	60 12234231	10 23223132	60 32422311
61 22423321	11 43422231	61 12433123	11 22122443	61 43112242
62 42333213	12 21312213	62 32432242	12 21243234	62 22324442
63 22134234	13 43322324	63 44433211	13 21122442	63 44422324
64 43344324	14 12342324	64 42342334	14 21231121	64 13442423
65 21311243	15 12312422	65 21113312	15 33324224	65 21343212
66 43442234	16 33243442	66 23443131	16 44232131	66 32134334
67 44334311	17 43112322	67 22133123	17 43111321	67 13423342
68 42232431	18 44312434	68 21344224	18 32332321	68 12312224
69 32332113	19 42332213	69 43312312	19 43224433	69 42234431
70 23243112	20 32122111	70 13422111	20 21123223	70 21112343
71 23434232	21 42212112	71 31332231	21 43324223	71 42223134
72 43244232	22 43421243	72 43122424	22 43213423	72 33434223
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74 22213331	24 42331334	74 12233344	24 13442132	74 44322243
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76 33312232	26 32433342	76 42122432	26 33211234	76 31331131
77 31113224	27 42123311	77 23342111	27 21123233	77 22133221
78 12234423	28 11324433	78 22431124	28 31312323	78 33111323
79 33324231	29 33232131	79 21113321	29 23432213	79 32434212
80 42342132	30 11311342	80 43122213	30 32132131	80 33431234
81 43423323	31 44331342	81 44332423	31 32211323	81 43332231
82 11234223	32 31124231	82 31244342	32 23334423	82 44432423
83 42423111	33 44231234	83 44331322	33 12321322	83 32443233
84 33423421	34 32424423	84 33133444	34 42233234	84 24324211
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88 21132312	38 43134422	88 13443122	38 33124344	88 31211343
89 32111231	39 33121342	89 43223343	39 32111332	89 44212433
90 32242331	40 43242134	90 44332243	40 31122132	90 43322244
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96 22134243	46 12332111	96 42211212	46 33112312	96 32432434
97 22131244	47 42213212	97 44321124	47 32444321	97 33133424
98 31113324	48 33324211	98 22124321	48 43134442	98 21132234
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00 44221311	50 43223433	00 32331232	50 23424432	00 43124244

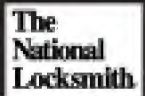


W0001-2000 TOYOTA

Keyblanks:

HPC/Silca TOY38R
 Taylor X174
 Curtis TR-40

1001	1051	1101	1151	1201
01 44234342	51 22443234	01 32133211	51 43111231	01 31123432
02 21313443	52 13423134	02 13431224	52 11342122	02 32213132
03 44433321	53 33423213	03 43443224	53 21243211	03 33124234
04 12113122	54 12313223	04 32231344	54 31223442	04 33231132
05 22323442	55 32342213	05 32312313	55 11223334	05 12442423
06 44333211	56 42431124	06 33124424	56 24223321	06 32424312
07 43312322	57 11134431	07 23424223	57 22123324	07 44312123
08 22313224	58 33242212	08 21223431	58 13231244	08 24312321
09 13221312	59 21221323	09 44322443	59 22113321	09 42243223
10 44233424	60 13444333	10 33423132	60 13434221	10 43123321
11 44223322	61 12224421	11 22233234	61 13443113	11 24321244
12 21342422	62 11334421	12 11133434	62 43244234	12 13421322
13 31212211	63 32312211	13 44343112	63 33424233	13 11312434
14 33234234	64 21324312	14 43122313	64 31321244	14 31324443
15 12312221	65 21334312	15 33422443	65 43122131	15 33233244
16 43243322	66 32122124	16 31123213	66 22323343	16 21322423
17 22434334	67 31321342	17 23442113	67 42344324	17 33213312
18 43113334	68 44321344	18 21243343	68 43123312	18 42442342
19 32443242	69 23443331	19 43311334	69 32124433	19 23422234
20 32213321	70 22134212	20 42112444	70 42442422	20 42344233
21 43324424	71 43421213	21 21134231	71 24231344	21 32433113
22 43133424	72 43321132	22 42331312	72 11213424	22 31134442
23 23233122	73 43221311	23 42431213	73 22134433	23 12334244
24 33243242	74 32233431	24 44433242	74 44233421	24 31312424
25 32211211	75 13434432	25 43431212	75 31243232	25 21132122
26 32322321	76 44342113	26 12434222	76 44313212	26 44422322
27 44312212	77 21123221	27 42311313	77 43234212	27 31112443
28 32233223	78 32132433	28 42212443	78 21224243	28 44333222
29 13334242	79 43122234	29 31213443	79 11124323	29 44244323
30 22433122	80 11133132	30 43242232	80 32132232	30 21133421
31 11322324	81 42323121	31 43133124	81 32212342	31 22112313
32 43133111	82 43231131	32 42223131	82 11332443	32 33232444
33 32312422	83 31134232	33 33423134	83 31212234	33 11211234
34 42213313	84 34443222	34 21221312	84 43213312	34 32133422
35 21112212	85 43331224	35 42234244	85 44231134	35 42133212
36 33122421	86 44223132	36 12321343	86 32132334	36 44213313
37 32442322	87 42232243	37 44212212	87 21223434	37 31221131
38 32434421	88 22131124	38 32244343	88 42342224	38 31213421
39 12431324	89 23113133	39 42433234	89 12313213	39 32442121
40 12422323	90 43323123	40 22312243	90 22324421	40 44322213
41 24332321	91 12433442	41 12234422	91 31342423	41 22133113
42 33421313	92 21113433	42 33113232	92 31344433	42 32123423
43 42233312	93 32311334	43 42433312	93 32232134	43 23442324
44 32342133	94 33231332	44 21131224	94 21311312	44 42234232
45 23443231	95 12243234	45 22123424	95 21321231	45 33242112
46 32113124	96 32321321	46 13424224	96 21343124	46 42423124
47 42212344	97 44321234	47 12232434	97 32244244	47 33243311
48 12331342	98 22133112	48 31321342	98 32442122	48 33443242
49 22434331	99 31234231	49 22212234	99 22321334	49 42243323
50 22423113	00 42422321	50 32133322	00 21213213	50 43433422



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Keyblanks:

HPC/Silca TOY38R
 Taylor X174
 Curtis TR-40

1251	1301	1351	1401	1451
51 11224424	01 22442423	51 31233443	01 33322112	51 42211234
52 31311212	02 44242332	52 22134331	02 42132111	52 22213323
53 33221131	03 33222133	53 13224223	03 32443423	53 22442321
54 33212331	04 32223431	54 24211324	04 43334211	54 32423443
55 33312123	05 44423343	55 31113212	05 44243112	55 13234233
56 44243232	06 23334424	56 44234221	06 13433431	56 23422313
57 44221343	07 31233221	57 42211221	07 33422243	57 32134332
58 32233124	08 31242131	58 21133342	08 43213323	58 42442313
59 32111232	09 31322444	59 21312332	09 13424233	59 21244242
60 32332123	10 43131232	60 21134432	10 12234234	60 11322231
61 44223312	11 43344213	61 31344342	11 43322332	61 43313322
62 32134231	12 31324432	62 44212344	12 33221224	62 33322434
63 43221121	13 21322421	63 33222431	13 21342312	63 33432432
64 12334432	14 31213334	64 32433442	14 13422121	64 31133312
65 33134212	15 43423332	65 33312324	15 22432123	65 32342112
66 11323323	16 31242442	66 42213343	16 12424321	66 33224423
67 22422334	17 13423442	67 23431131	17 11134223	67 31243431
68 44232234	18 42133433	68 12331244	18 33324324	68 12322111
69 31123342	19 13432421	69 42432224	19 31223211	69 22423423
70 43113342	20 22131331	70 32324422	20 32444234	70 43121332
71 32422442	21 32311242	71 22432444	21 44312311	71 44221324
72 32212432	22 32233123	72 12332433	22 32133324	72 11224334
73 33424331	23 43243212	73 43222113	23 22444221	73 43234433
74 32213342	24 21322331	74 32321332	24 44223324	74 42233122
75 23423332	25 31112421	75 21332434	25 33324432	75 43311244
76 43432433	26 43433431	76 42313421	26 24433222	76 12423323
77 43133443	27 32312231	77 23423324	27 23443313	77 43243323
78 23442133	28 33422434	78 12334242	28 44233431	78 21321134
79 31223434	29 32122433	79 43423422	29 42344433	79 31324313
80 44243213	30 32233443	80 31113312	30 12424433	80 33422423
81 43321332	31 43132433	81 13443234	31 33242211	81 32233344
82 12442243	32 21313321	82 44244222	32 21132331	82 33212232
83 31123421	33 31232243	83 33444223	33 43132443	83 21234234
84 31342213	34 42423434	84 33224343	34 22211124	84 24344242
85 42132122	35 12434234	85 12444333	35 32423112	85 23342232
86 43213133	36 33232134	86 43313442	36 44211324	86 32124332
87 31122323	37 22133322	87 43423423	37 32342324	87 43133113
88 32244223	38 32232443	88 44331224	38 32342224	88 43242344
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93 43312343	43 23334223	93 21331234	43 21233344	93 31331321
94 22312444	44 31133121	94 42231134	44 22213421	94 42113234
95 13442331	45 31222113	95 11324231	45 44342122	95 43443243
96 42312431	46 12322131	96 13342342	46 31342421	96 31322321
97 22332113	47 31121323	97 22243324	47 32123324	97 22334423
98 23431213	48 32242431	98 23123434	48 43223321	98 42132312
99 43322431	49 33224323	99 33432444	49 32113434	99 42224333
00 43422434	50 42221343	00 43312434	50 33321131	00 22431321



W0001-2000 TOYOTA

Keyblanks:

HPC/Silca TOY38R
 Taylor X174
 Curtis TR-40

1501	1551	1601	1651	1701
01 32133431	51 42124432	01 43344432	51 22111323	01 21221331
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03 33443131	53 31124334	03 13223132	53 33433424	03 34233134
04 12234244	54 23313112	04 12444234	54 31232112	04 22334331
05 11213343	55 43334222	05 21323323	55 42311321	05 32433243
06 44332311	56 42312343	06 42213342	56 22112244	06 31244212
07 23433213	57 43123322	07 23443323	57 43243423	07 31223221
08 23334222	58 23423444	08 32432444	58 24312324	08 33212313
09 43443122	59 12422124	09 44221332	59 31334223	09 22331121
10 44232133	60 31232244	10 43442342	60 23432132	10 42131331
11 13433444	61 42233244	11 24233134	61 33321342	11 32244324
12 13342323	62 33311244	12 21223342	62 21321213	12 31233442
13 13343112	63 22233344	13 12334342	63 32213221	13 22134423
14 31133224	64 33231131	14 11212242	64 11312422	14 42121131
15 31121221	65 13433221	15 21234211	65 31124432	15 42111343
16 11223124	66 44213244	16 43121234	66 42422431	16 43121334
17 34432211	67 13422324	17 32243111	67 32431244	17 13434224
18 11322112	68 33112424	18 43242212	68 44211323	18 22113244
19 44311321	69 21124431	19 42124333	69 32332221	19 13422422
20 43344212	70 32133232	20 43242211	70 21333223	20 21121134
21 12212112	71 13334432	21 32134223	71 42122334	21 42123442
22 42234334	72 23423133	22 42132132	72 42113442	22 13122122
23 12332123	73 43123423	23 13421213	73 31334431	23 44343113
24 31123423	74 23433113	24 23443443	74 23443342	24 22231131
25 42211124	75 44232231	25 23421324	75 11323221	25 11211232
26 34423112	76 44323111	26 23431243	76 44422432	26 33434222
27 21344321	77 31233211	27 44313224	77 42334424	27 32212213
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32 44342131	82 31344234	32 33134231	82 44432221	32 23443222
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34 42431224	84 23442321	34 33422132	84 21112224	34 12313222
35 42134322	85 43131242	35 42332324	85 32132224	35 33242343
36 43211322	86 32431234	36 13334423	86 22211231	36 24443331
37 43244422	87 24421332	37 33443234	87 21221243	37 12322443
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39 42122312	89 31133243	39 13442113	89 33123211	39 42223421
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43 43234244	93 43233224	43 21133432	93 23311343	43 43221131
44 32122112	94 32223133	44 42331242	94 23334242	44 22111321
45 22123124	95 42233131	45 43122332	95 23334434	45 31112231
46 21333212	96 32442212	46 21233321	96 22134432	46 21243122
47 31223234	97 32424332	47 43224221	97 11213223	47 43134212
48 42213231	98 11332332	48 33134213	98 43113223	48 21223121
49 42224424	99 43212211	49 42433222	99 22112133	49 32312443
50 33423121	00 13432221	50 21133121	00 31231224	50 42343223



W0001-2000 TOYOTA

Keyblanks:

HPC/Silca TOY38R
 Taylor X174
 Curtis TR-40

1751	1801	1851	1901	1951
51 44344232	01 44423224	51 22133232	01 13424213	51 33422121
52 31123243	02 33122422	52 43344334	02 21312242	52 43332131
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54 43132131	04 21133431	54 42443222	04 22213134	54 42422334
55 31224443	05 22433423	55 12234433	05 23431121	55 11324344
56 13423343	06 13423122	56 44211343	06 33134423	56 42322323
57 11234222	07 42234211	57 42212431	07 12332442	57 43242234
58 12434233	08 12233324	58 31132431	08 33431221	58 43124243
59 43222131	09 13343421	59 43244322	09 12244323	59 43443234
60 33132124	10 43442121	60 23434223	10 33322432	60 33321121
61 33212332	11 31321124	61 31121321	11 42211344	61 12133222
62 44333121	12 44213421	62 12231332	12 43213232	62 33122244
63 32212112	13 42312442	63 31332424	13 42121132	63 21224343
64 31342433	14 24331244	64 31222432	14 21223442	64 12322331
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66 42233224	16 31332244	66 11343222	16 34422343	66 12343111
67 21313244	17 42321132	67 44313112	17 44232113	67 11332123
68 11122434	18 43224423	68 23421344	18 44433243	68 12422321
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70 24223131	20 13432242	70 33423231	20 42213233	70 23443423
71 21311232	21 43244233	71 42243422	21 42213423	71 21331243
72 13213344	22 22213342	72 42111323	22 22132213	72 31322431
73 44323312	23 11332431	73 44312343	23 43442423	73 13243122
74 11321213	24 12442121	74 23344231	24 43422323	74 21134434
75 32442234	25 43213223	75 31311234	25 11321243	75 21233131
76 43313422	26 43234242	76 21122123	26 32443431	76 12233321
77 22312343	27 22133442	77 43134213	27 42133434	77 32211221
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79 21342334	29 12422121	79 43112424	29 12432312	79 22421332
80 43221231	30 12224323	80 11212231	30 21211321	80 42242134
81 21343422	31 31332121	81 22134431	31 44432112	81 33222134
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83 22131332	33 44432342	83 21122113	33 43123134	83 21332211
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89 42133344	39 21312234	89 31324211	39 43223421	89 31244312
90 21312231	40 12342431	90 31112444	40 11233431	90 43243124
91 32421322	41 23342423	91 32434332	41 43213113	91 44244331
92 42244221	42 32213343	92 42112434	42 43122124	92 42343244
93 33311243	43 33112421	93 12432423	43 33233444	93 42234332
94 11123233	44 33444312	94 12321331	44 21331132	94 33222442
95 42312323	45 12323421	95 33234421	45 42112124	95 11234331
96 44311234	46 32422432	96 42313112	46 21333213	96 21223233
97 22112432	47 42244433	97 32134443	47 22432312	97 32332431
98 42343342	48 31334243	98 24311344	48 42421121	98 42243224
99 43343122	49 21231244	99 31332112	49 44431311	99 43244431
00 21221344	50 31322121	00 31221231	50 43243113	00 12442231

Shop Talk

Helpful Questions and Answers

Written by all of the following authors: Shirl Schamp, Dale Libby, Robert Sieveking, Jack Roberts, Dave McOmie, and Don O'Shall.

Send your locksmith questions, along with a self-addressed stamped envelope to: Shop Talk, The National Locksmith, 1533 Burgundy Pkwy., Streamwood, IL 60107.

Ted Porter, a Shop Talker from California has sent some additional information for Richard Niemann. Mr. Niemann's March question was about making a key for his Marlin

handcuffs. Mr. Porter writes that, indeed, the keys were made by Taylor Lock and that he has a couple left in stock. Mr. Porter's address is 100 S. 2nd St., Barstow, CA 92311.

Q: I read an article somewhere that says that the Best/Falcon (A2) core control key should have the opposite pattern of odd and even cuts as the top master key to minimize the chance of a change key or master key being close enough to the control key to allow it to "accidentally" release the control lug. Yet in The National Locksmith Guide To Interchangeable Core Servicing, I see no mention of this. Also, your illus-

trations use control keys with the same pattern as the master. Is this an oversight or am I mis-reading it?

*Fred Peterson
New York*

A: No, you are not mis-reading it, and it is not an oversight. Falcon lock often uses control keys with the pattern suggested in the article, while Best Lock does not.

Without reversing the odds and evens as described, it is conceivable that a key for the system could be identical to the control key except for one or more positions which would be .025" (twenty-five thousandths) different. There would be twelve keys only different in one position by this amount.

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Using the pattern reversal process as described, it is possible that a key for the system could be only .012" (twelve thousandths) different from the control key all across the key. Pulling out only slightly on such a key would allow it to pull the core.

Either way, the threat of core control interchange exists, and which you choose is largely a matter of personal preference.

However, if you have a control key with a bitting of 694563 and a change key appears with cuts of 674563, the similarity will probably stand out, and you would reject the bitting as "undesirable." A change key with cuts of 583452 might not stand out as much, and could be used with a false sense of security, despite the fact that it poses a much greater threat of control (core) shearline interchange. 05

Q: I have been having a problem with crazy glue. About once a month, one of my customers has been getting crazy glue put in his front door lock. I repeatedly go over and replace or clean the lock out, so he asked me if I knew of a

way to keep this from happening again. I have not had any experience with crazy glue in locks, so I thought I would write you a letter to see if you knew something that might remedy this situation. This is a mortise type pin tumbler lock.

Dennis Wittmer
Illinois

A: Funny you should mention! We published an article on how to dissolve this glue out of locks. The article ran on page 60 of the March 1989 issue of *The National Locksmith*. There is no way to prevent glue from being squirted into a lock.

However, the procedure was given in March on how to remove the glue once it is there. To recap the method, acetone is heated with a special miniature heater. The probe is inserted into the lock and the warmed acetone flushes the glue away in a few minutes. The heater-probe is made by ARI Industries of Addison, Illinois. Use extreme caution with this method as acetone is highly flammable. Use only the proper assembly.

Q: I have been trying to locate a lock cylinder with keys for a 1973 Volkswagen Micro bus since last November with no luck. The only information that I have is the number 211-905-855-C stamped on the lock. If anyone out there has any information as to where one might be found, I would sure appreciate the information.

Doug Trauschke
South Carolina

A: As you become more involved in servicing and making keys for foreign autos, you will need to become more familiar with the sources of supply for replacement parts. Specific information is usually not free, so you can expect to pay for the answers to some of the more technical questions you will come up with. Numbers found on locks, unless they are the code for that cylinder, will usually have no special significance for the locksmith.

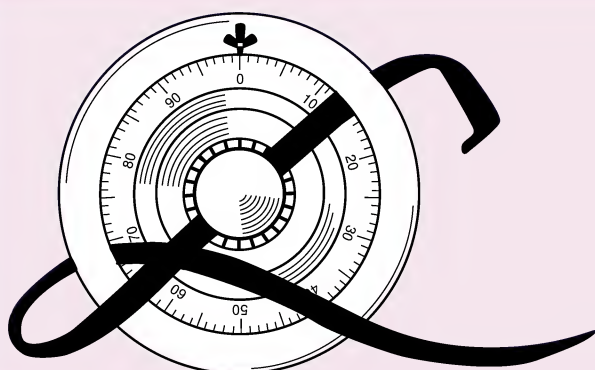
The answer to your specific request for an ignition lock to your 73 VW bus is to order a C-31-103 ignition lock from a distributor that sells the "Auto Security Products" line. Auto Security Products is the largest supplier of foreign automotive locks that I know of.

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They also sell a catalog that should be standard equipment for anyone that works on foreign cars. The excellent photography in the catalog makes it extremely handy when you need to identify a lock by a certain auto manufacturer. Each lock is identified by photograph, the name of the auto manufacturer, country of origin, the keyway (by Taylor number) and years of application to the particular vehicle. A part number for ordering from "your supplier" is also given.

If you need a catalog, you can contact Auto Security Products at P.O. Box 2937, Kirkland, WA 98083-2937.

06

Q: My question is about a Yale padlock with a double cylinder. (See illustration 1.) I have tried unsuccessfully to produce keys for this lock using my HPC padlock code book and 1200 code machine. I have also been unable to impression keys to these cylinders, probably because I don't have the correct key section. I found that this lock cannot be disassembled until the shackle is opened. The two cylinders of this lock accept two different key sections.

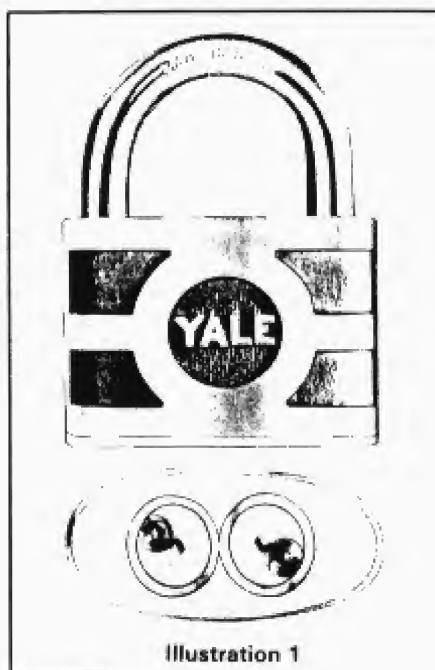


Illustration 1

Do I need sectional blanks from Yale? The codes shown on the face of the cylinders are "23 SH" and "50 PF." Can you cross these codes to give me the cuts for the keys? Is this lock worth anything in terms of collectability? Can you shed any light on this problem for me? HELP!

Larry Kanzer
Pennsylvania

A: From the illustration and description, you seem to have a Yale 945 or 937 "Bicentric" padlock. The Yale 945 had two cylinders that were mechanically interlocked so as to require both keys to open the lock. This dual custody padlock operated very much like a safe deposit box lock. The Yale 937 had two cylinders also, but either cylinder was capable of opening the lock. It is common to find these locks with different key sections in each cylinder.

I can't give you the specific age of your lock, but up until about six or eight years ago, you could still buy this lock from Yale. Manufacturing was discontinued in 1980. Though the double cylinder padlock was never all that common, it had some special safety and security applications. The value of your padlock is between twenty and seventy-five dollars because of its rarity and not necessarily its age. You might also be interested to know that Yale makes "Bicentric" mortise cylinders and key-in-knob locks.

The nice thing about codes, is that you can trace the lock to some degree.



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The "50 PF" cylinder, identifies the lock as part of a system owned by the Pennsylvania Power and Light Company, and the keyway "PF," as proprietary. (A proprietary keyway is more or less owned by the end user. The manufacturer agrees not to make or sell proprietary keys or lock plugs to anyone else.) The proprietary keyway suggests that you will probably not find a key blank that will fit the cylinder without some modification. The fact that the code identifies the lock as the property of PA P&L, suggests that you might want to return it to your customer without keys. Know your customer. Don't make a key to Pandoras' box.

To answer your question as to the best method of making a key for this lock, I would think that impressioning would be the easiest. After finding or manufacturing a blank to fit the cylinder, impression the first key. Yale used a round nose pin that made impressioning the sectional cylinders more difficult than cylinders pinned with the more pointed conical pins. After opening the lock, recombine the cylinders to a new key, so as not to risk compromising any other locks that

might use the same code. Patience and perseverance will make a key to open the lock. 06

Q: As a beginning locksmith I need some help. With all the tools, key blanks, accessories, code and how-to books on the market today, I hardly know what I need to set up a small shop. I will be doing this work part time. Still, I know there are certain essentials one needs in the shop. Basically, could you recommend what I should start with. Thank you for your time and effort.

*Jim Richardson
Kentucky*

A: The question you are asking is one of the most often asked questions in our industry today. Countless students, seminar attendees, and readers have asked it before you, and will after you. But it cannot be truly answered.

In courses we often make a list of "suggested tools" with several thousands of dollars worth of equipment listed. But the truth is, that is both too

much and too little. It is too much because there are tools on it you won't use for years, and it is too little because the tool you will need tomorrow afternoon isn't on it. Why? Because everything about you, your area, your business, your customers, and your shop is truly unique.

You will have to look at yourself, the shop you want, and the immediate area in order to determine what needs you can fulfill for your customers. In short, sum up yourself and your potential in your area, and then choose a target market...the work you hope to "specialize" in. If possible take a rifle approach to it to focus your resources rather than scattering your efforts in a wide shotgun pattern. Then take a shot at the future and hope.

Here are some specifics. You'll need a key duplicator; probably a simple, light duty one will do for awhile. Ask your distributor for help on keyblanks. You'll want a supply of the most popular numbers.

Select the code books you'll need and think about a code machine. There are various ones available. You can even look for depth keys to get started. After that, choose a few car openers,



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files, pliers, etc. A cordless drill is almost a must. After that, experience will show you what you're missing.

You will waste some money on things you don't need. We all did and do. But if you concentrate on tools (not toys) to make you money in your selected areas of expertise, you will at least minimize the waste.

In the end, however, one sad fact will remain. Short of bankrupting yourself or your business or squeezing the wallet too tightly to allow for necessary saleable items, it is unfortunately better to have too much than too little.

The tool you find you're not using has cost you the value of the price you paid for it. The tool or book you didn't buy, and don't have, could cost you much more.

Inventory of locks and keys is another story, however. Tools and reference books are an investment. Hardware inventory that sits on your shelf is not an investment. Only inventory that you can "turn over" is an investment.

Turnover (buying and selling and replacing it to sell again) makes money. Inventory sitting on a shelf costs money. Watch your inventory constantly and if you lose a little of what you paid for it by having to sell it at a loss, if that money can then be invested into saleable inventory, then you will win in the end. 05

Q: A customer has asked me to open the safe shown in photograph two. He said that two years ago he took the plate off the lock and filled it full of graphite and said he has been unable to open the safe since.

This is the combination he has: L stop on 100, R 2 times stop on 76, L to mark, R to open. I tried this combination several times with no success.



2. Safe submitted for opening ideas.

I am asking for your help in opening this safe because I have limited experience in safe work. Can you advise where to drill, or any other way to get this safe open? It has double doors inside. On the right handle are the numbers 10816.

Jack Oliver
Ohio

A: Jack, my educated guess, without having more information, is that you have a Hall's cast iron fire safe. Put counterclockwise pressure on the handle and try to turn the dial. If the dial binds severely, the chances are excellent that my guess is correct. If the dial does not bind, then my guess is useless in which case you are instructed to ignore the following and send more information.

On the assumption that it is a Hall's, drill just outside the dial ring above zero, at a pretty steep angle as demonstrated in photograph three. At this drill point you will miss the hardplate, and pierce the top of the round lockcase.



3. Proper drilling angle for a Hall's safe.

To gain access to all the wheels, you may have to elongate the hole in the case. This can be done through the same outside hole. Line the wheel gates up, record the respective numbers, and transfer these numbers to the 9 o'clock position. You may have to add or subtract a number or two for the gates to line up with the tailpiece. Also, don't be afraid to jiggle the heck out of the handle.

Good luck and remember, if the dial does not bind when you apply counterclockwise pressure to the handle, ignore the procedure I just outlined.

Q: Could you give me the spacing and depth measurements for the Best padlock, using the "M" series key blank



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with 7 pins. Are there codes to these locks? Where is the first cut measured from?

Tony
Michigan

A: Before I answer your direct questions, I'd like to ask you a few. Who is your customer and what are the circumstances that bring the lock to you? And what do you mean by the "M" key blank?

Best does have an M keyway, but it is *highly* restricted, and to the best of my knowledge, doesn't appear in any key blank catalog, which would make it a bit difficult to recognize.

Many key blank books, as well as *Practical Masterkeying*, use the symbol M to identify the sectional master key blank that passes all of Best's "standard" keyways. But Best does not make plugs in the sectional master keyway, so the actual keyway would be one of its others.

No, there are no codes available for these. They are not sold to the public. They are a part of a proprietary masterkey system purchased by an institution, whose security could be totally violated by the indiscriminate key fitting to its locks. Instead a visual ID number representing the position in the system of the key to fit it would be stamped on the core, usually on its side.

Since they are a part of the masterkey system, the master key as well as the core control key would both operate it, as well as its own change key. If the change key became lost or could not be identified, the core control key would be used to "pull" the core and identify it by the visual ID number.

Having a customer in legitimate possession of such a lock who has *none* of the keys for it is a rare situation indeed. Locksmiths are becoming heavily involved with institutional locksmithing, but this is not one of the services commonly required.

Actual depths for the key would depend on whether the system is set up on the A2, A3, or A4 series depths. This is largely based on the size and type of institution.

Smaller institutions tend to be on the A2 depths, while large institutions tend to use the A4. The A3 is usually only found in U.S. government agencies, and usually on restricted keyways (such as the actual M keyway).

Cut spacing is measured from the square of the notch below the tip of the key, which acts as its stop.



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From stop to:

first space = .080"
second space = .230"
third space = .380"
fourth space = .530"
fifth space = .680"
sixth space = .830"
seventh space = .980"

Cut depths are as follows:

	A2	A3	A4
0	.318	.318	.318
1	.305	.300	.297
2	.293	.282	.276
3	.280	.264	.255
4	.268	.246	.234
5	.255	.228	.213
6	.243	.210	
7	.230		
8	.218		
9	.205		

Picking the lock to the core removal position allows for decoding and key fitting, or the lock can be impressed. In either case, with only one lock to decode, there is a good chance that your key may actually be one of the masters for the system. A good idea would be to remove and replace the core, or at least remove and re-key it to a non-masterkeyed set of depths. 05

Q: Recently a man contacted me to open a locked safe which he had no combination to and of course it was locked. The safe had been painted and there was no visible brand name on it that I could find. The dial was a Yale & Towne with "Patd. Sept. 15, 1896" stamped on it. It had a T handle, which had 1777 stamped on it. It may be a National or Hall T handle.

I have an HPC Inc. Safe & Vault Manual, and as far as I can tell it's a J.



4. Unidentified safe, in need of opening.

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Baum Safe, but being new at this, I'm not certain. I read and study The National Locksmith magazine as if it was a textbook. If you can give me any helpful suggestions as to getting this safe open I'll be very grateful. Photograph four is a picture of the safe.

*Jay Robbins
Illinois*

A: Jay, first of all let me congratulate you on a fine choice for a profession. You will probably never become a rich man in this business, but the personal satisfaction that you will gain from overcoming challenge after challenge is priceless in itself. On the other side of the same coin, however, I want to stress that you not undercharge for your services. There is nothing unethical about trying to make a profit. This was a hard lesson for me to learn, and I still have to ward off occasional relapses of the capitalist guilt complex.

Now to your safe. No, it is not a Baum. The Baum T-handle is very distinctive; the part that the "T" goes through is not ball-shaped, but more closely resembles a can laying on it's side—round on the sides, but flat on the face.

I can't pinpoint the original manufacturer for you, but I think between the two of us we can identify the lock, which is really all we need to deduce a drill point.

I believe it is either a Yale OB, in which case the dial may bind slightly in the contact area as pressure is applied to the handle, or it can be a Yale 024 which normally won't exhibit any signs of binding. That is your job Jay, to try and detect a bind in the dial. The only reason this has any importance is that the drop-in positions are different for these locks. The OB drops in at 6 o'clock; the 024 drops in at about 10 o'clock.

On your safe I think I would drill in at an angle from outside the dial ring, just to the left of zero. Take your wheel readings and transfer them to the respective drop-in point. Good luck and let us know how you make out.04

Letters

Continued from page 6

messages, key duplications, repairing mortise locks recombining cylinders, etc. I believe an article such as this gives other women in this trade a moral boost, and makes us feel less like outcasts.

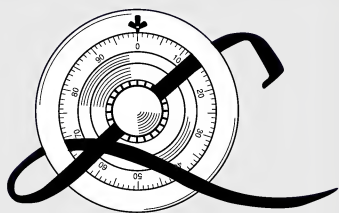
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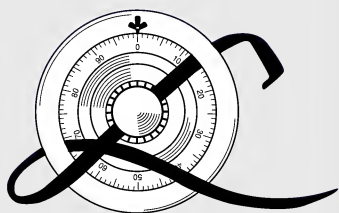
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looks that people give me when they ask what I do for a living and I state "I'm a locksmith." Consider for a moment the feeling of incompetence when your customer can't believe that you're the one who will be servicing their home or industry and they look out the door to see if there is a male trailing behind you. Many times I get a feeling of resentment for their lack of confidence in my ability as a locksmith. Trust me when I say there are many stories we women can tell about our field experiences.

Thank you for taking the time to read my feedback on the "Lady Locksmith" article. It served as an inspiration. This comes from a woman who does service work alongside her husband, with her own service truck equipped with the stock and equipment to handle most every need.

Cheryl Magri
Massachusetts

Technitips

Continued from page 15

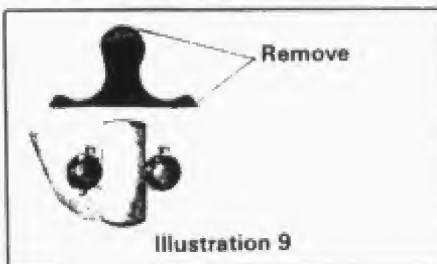


Illustration 9

the cam as shown in illustration nine, you will have a cam that is completely compatible with the 4500 deadbolt and which will also reduce the amount of key rotation required to extend or retract the bolt.

Jim Keienburg
Texas

This Technitip concerns solving the three and four wheel combination locks used on suitcases and other luggage without damage to the locks.

The majority of these locks will give indication on the right side of the combination wheels as shown in illustration ten. As each wheel is turned, a notch or flat on the inner hub of the combination wheel will be brought under a "spring plate" which blocks movement of the unlocking slide of the lock. If all three wheels are properly positioned, the spring plate will move or drop into the notch or flat on the inner hub of the wheel, allowing the lock catch to be opened.

1. In some cases, it is possible to peek into the crack along the right side



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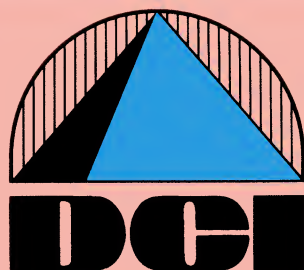
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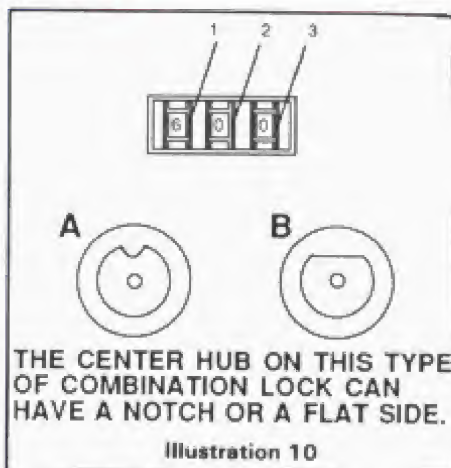


Illustration 10

of the wheel with a strong light to see the notch or flat side of the inner hub as it is brought to the front of the lock.

2. Sometimes it is easier to use a small piece of shim material to feel the hub as it is turned. By shaping the end of the shim to a rounded point, you can feel the notch or flat as it comes to the front.

3. A needle or piece of very fine spring wire will also work in case the wheel has a shoulder that prevents the shim material from entering far enough to contact the inner hub. Bend the tip of the wire to bypass the shoulder on the wheel as it is inserted. Feel for the notch in the inner hub as the wheel is turned.

Once all the wheels have been aligned with the notch to the front, the lock should open. If it does not, note the combination and move the wheels "together," around one number at a time and try opening the lock each time. If the combination found was 698, the next number to try would be 709, then 810, then 921 etc. around until the lock opens. This method will open the majority of this type of lock.

Abdul Hamid Abdurahman Adem
Asmara, Ethiopia

A & B Safe Opening

Continued from page 56

I learned something that I knew, but sometimes when one has been working on safes too long, he may forget some basics. Now, I know that when I do not get contact points when I am turning the dial, something else is wrong other than just a sheared-off fly on the drive wheel. I would probably attack the safe a little differently, if I were called on to open it again under the exact circumstances. I would not attack the lock bolt, however, but drill in a position that would make it easier to push the

lever into the lock once it had been comprised.

Editor's Note: Another way to handle this opening would be to drill at the fence (drillpoint= 97 x 7/8). Probe the gates around with an ice pick. The fence will drop in, then you can manually probe the wheels in a clockwise direction, retracting the lock bolt. ■

Lockscope

Continued from page 63



9. A 90 degree mirror sheath used to view the inside of a Mosler MR 302.



10. The inside of a four-wheel Peerless lock as seen through the Lockscope with the mirror sheath.

Well, the only important thing left to talk about is the bottom line. The current components for the Lockscope are as follows: **Lockscope:** 5.9mm diameter; 10" working length; direct view; 50 degree field of view. **Side-view mirror sheath:** 6.2mm diameter. **72" Fiberoptic Light Guide Cable:** carries light from the Light Source to the Lockscope. **ILK-5 AC powered 150W light source.** All this can be purchased for under \$1400.

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